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ABSTRACT

The major purpose of this report is to analyze early childhood research supported by the member agencies of the Interagency Panel on Early Childhood Research and Development during the most recent fiscal year, in order to chart the directions in which federal research programs are moving, both within individual agencies and within the federal government as a whole. Chapter I reviews the history, operational structure and fiscal year 1977 activities of the Panel. Chapter II describes the Panel's new organizational theme, "child development and the family," and identifies four perspectives (developmental, ecological, preventive, and strength-oriented) for future attention. Chapter III examines the combined research of all the agencies, presenting information on the number of projects and amount of funding in selected categories of research; these categories pertain to major areas of research (e.g., cognitive growth and development, the family, educational services), major kinds of research (e.g., basic, applied, evaluation), and research target groups (e.g., by age, socioeconomic status and race). Changes from fiscal year 1976 to fiscal year 1977 in levels of activity in these categories are briefly examined. In Chapter IV similar kinds of analyses are presented separately for each agency. Appendices include a chart of agency plans for research on children in 1978, a membership list, and a bibliography of documents prepared for the Interagency Panels on Early Childhood and Adolescence Research and Development. (Author/CM)

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Toward Interagency Coordination

FY '77 Federal Research and Development on Early Childhood

Seventh Annual Report

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Toward Interagency Coordination:
FY '77 Federal Research and Development on Early Childhood

Seventh Annual Report

Prepared for
The Interagency Panel on
Early Childhood Research and Development

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May 1978

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Participating Member Agencies of the Interagency Panel on Early Childhood Research and Development

- Department of Agriculture (USDA)
- Department of Commerce, Center for Census Use Studies
- Department of Health, Education and Welfare (DHEW)
  - Office of the Assistant Secretary for Planning and Evaluation (ASPE)
  - Office of Human Development Services (OHDS)
  - Office of Planning, Research and Evaluation (OPRE)
  - Administration for Children, Youth and Families (ACYF)
  - Administration for Public Services (APS)
  - Rehabilitation Services Administration (RSA)
  - Bureau of Community Health Services (BCHS)
  - National Institute of Mental Health (NIMH)
  - National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)
  - National Institute of Child Health and Human Development (NICHD)
  - National Institute on Drug Abuse (NIDA)
  - National Institute on Alcohol Abuse and Alcoholism (NIAAA)
  - National Center for Education Statistics (NCES)
  - Office of Education (OE)
  - National Institute of Education (NIE)
- Department of Housing and Urban Development (HUD)
- Department of Labor (DOL)
- National Science Foundation (NSF)
- Office of Management and Budget (OMB)

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TABLE OF CONTENTS

Page

INTRODUCTION.. 1

I. THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT.. 3

- History and Mission.. 3
- Membership and Operational Structure........................ 3
- Presentations to the Panel During FY '77.................... 6
- The Information Systems.................................... 19
  - The Interagency Research Information System (IRIS)........ 19
  - The Information Retrieval and Analysis System (IRAS)...... 22
- Outreach Activities.. 23
- The Status of Children..................................... 25
- The International Year of the Child........................ 26
- Information Utilization in FY '77.......................... 28

II. THE PANEL'S THEME: CHILD DEVELOPMENT AND THE FAMILY............... 30

- The Theme as an Aid in Coordination........................ 30
- A Previous Panel Theme..................................... 31
- A New Panel Theme: Child Development and the Family........ 32
- A Panel Conference on the Theme............................ 46

III. AN ANALYSIS OF THE OVERALL FY '77 FEDERAL EFFORT IN EARLY CHILDHOOD RESEARCH AND DEVELOPMENT.......................... 47

- The Agencies... 47
- Type of Funding.. 48
- Interpreting the Data...................................... 52
- Major Areas of Research.................................... 53
- Kinds of Research.. 56
- The Developmental Processes................................ 58
- The Family... 63
- The Broader Social and Physical Environment................ 65
- Intervention Programs and Services......................... 67
- The Research Process....................................... 72
- Target Groups.. 72
- Comparisons of FY '76 and FY '77 Activities................ 81
- Summaries of Findings from Federally Supported Research on Children and Adolescents......................... 84

Page

IV. AN ANALYSIS OF FY '77 EARLY CHILDHOOD RESEARCH, BY AGENCY........ 86

- Office of the Assistant Secretary for Planning and Evaluation........ 88
- Office of Planning, Research, and Evaluation........ 93
- Administration for Children, Youth, and Families........ 94
- Administration for Public Services........ 103
- Rehabilitation Services Administration........ 108
- Bureau of Community Health Services........ 113
- Health Care Financing Administration........ 120
- National Institute of Child Health and Human Development........ 124
- National Institute of Mental Health........ 133
- National Institute of Neurological and Communicative Disorders and Stroke........ 142
- National Institute on Alcohol Abuse and Alcoholism........ 149
- National Institute on Drug Abuse........ 155
- National Center for Education Statistics........ 161
- National Institute of Education........ 165
- Office of Education........ 173
  - Bureau of Education for the Handicapped........ 176
  - Bureau of Elementary and Secondary Education........ 184
  - Bureau of Occupational and Adult Education........ 189
  - Division of International Education........ 194
  - Office of Bilingual Education........ 197
  - Office of Career Education........ 203
  - Office of Indian Education........ 209
  - Office of Planning, Budgeting and Evaluation........ 216
  - Right to Read Effort........ 220
- U.S. Department of Agriculture........ 225
- Bureau of the Census........ 231
- National Science Foundation........ 232

APPENDIXES

A. Agency Plans for Early Childhood Research, FY '78........ 239
B. Early Childhood Panel Membership List........ 247
C. Documents Prepared for the Interagency Panels on Early Childhood and Adolescence Research and Development........ 253

REFERENCES........ 259

INTRODUCTION

The Annual Reports are unique reference books produced by the Interagency Panels. They provide the only comprehensive overview of ongoing childhood and adolescence research activities across major funding agencies at the Federal level. They offer Panel members and agencies a first cut at the more extensive and detailed information than can be obtained from the Panels' information system.

The major purpose of the Early Childhood Panel's annual report is to analyze early childhood research supported by the member agencies during the most recent fiscal year, in order to chart the directions in which Federal research programs are moving, both within individual agencies and within the Federal government as a whole. These analyses can aid Federal agencies in several ways. First, by filtering out child-related research from the broad array of research areas which many agencies support, they provide each agency a sharper picture of its own research activities which pertain to children. Also, by presenting analyses of the research activity supported by all of the agencies, the report enables an individual agency to compare its own pattern of research support with that of any other agency. In this way, an agency can identify the areas of research in which its funding activity overlaps with that of another agency's, or can detect points of convergence and congruence where increased interagency communication and coordination would be especially fruitful. Finally, an agency can examine the overall picture of Federal research and development in order to determine gaps in the total Federal effort that are relevant to its own research mission, and use this information to guide the development of its forward plans.

Chapter I of the report reviews the history, operational structure, and FY '77 activities of the Interagency Panel on Early Childhood Research and Development.

Chapter II describes the Early Childhood Panel's new organizational theme, child development and the family, and four perspectives which will receive special attention in future Panel discussions, activities and documents: (1) developmental; (2) ecological; (3) preventive; and (4) strenth-oriented. This chapter also discusses the developmental/ ecological model which the Panel has adopted as an aid in conceptualizing and categorizing research issues.

In Chapter III, the combined research of all of the agencies is examined, with information presented on the number of projects and amount of funding in selected categories of research. These categories pertain to major areas of research (e.g., cognitive growth and development, the family, educational services), major kinds of research (e.g., basic, applied, evaluation), and research target groups (e.g., by age, socioeconomic status, and race). Changes from FY '76 to FY '77 in levels of activity in these categories are briefly examined. The availability of findings information across the various areas identified by the Panels' Information System is also assessed.

In Chapter IV, similar kinds of analyses are presented, but they are presented separately for each agency, rather than for the overall Federal effort.

In Appendix A, priorities of the agencies for FY '78 and beyond are examined within a matrix of research issues and areas.

In summary, this report presents information on Federally-funded early childhood research projects active in FY '77. Some of these projects are continuing projects and were included in the data base of the last annual report; others are new starts. For the most part, this report describes and analyzes ongoing research, and does not address completed projects.

CHAPTER I

THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

History and Mission

In 1970, the Interagency Panel on Early Childhood Research and Development was convened by the Director of the Office of Child Development at the request of the Secretary of the Department of Health, Education and Welfare, and the Director of the Office of Management and Budget. The primary mission of the Panel is to facilitate Federal interagency coordination and cooperation in the planning, funding and analysis of early childhood research and development (covering the age range of prenatal through nine years). The Early Childhood Panel served as an organizational model for another Panel, which was created in 1972 and similarly charged with promoting cooperation and exchange of information between Federal agencies who support work on youth and adolescents. The Interagency Panel for Research and Development on Adolescence, whose age coverage extends from ten years through adolescence and into the early twenties, carries out its tasks in close cooperation with the Early Childhood Panel. The two Panels share information about their agencies' research programs and plans, and diverse problems and issues of interagency concern. Furthermore in cases where their interests coincide, the Panels participate jointly in special meetings and activities.

Membership and Operational Structure

The Early Childhood and Adolescence Panels draw their members from the Office of Management and Budget, ACTION, the National Science Foundation, and six Federal Departments: Agriculture; Commerce; Health, Education and Welfare; Housing and Urban Development; Justice; and Labor.

Many agencies within these departments actively participate in Interagency Panel activities. (See the list of agencies on the inside of the title page.) Each agency has designated a number of individuals who attend regular meetings of the Panels and participate in other Panel activities. The individuals who currently represent their agencies on the Early Childhood Panel are listed in Appendix B.

Both the Adolescence and the Early Childhood Panels welcomed the National Science Foundation as a new member agency in the summer of 1977. The National Science Foundation funds important basic research on children and youth, which is now included in the Panels' information system.

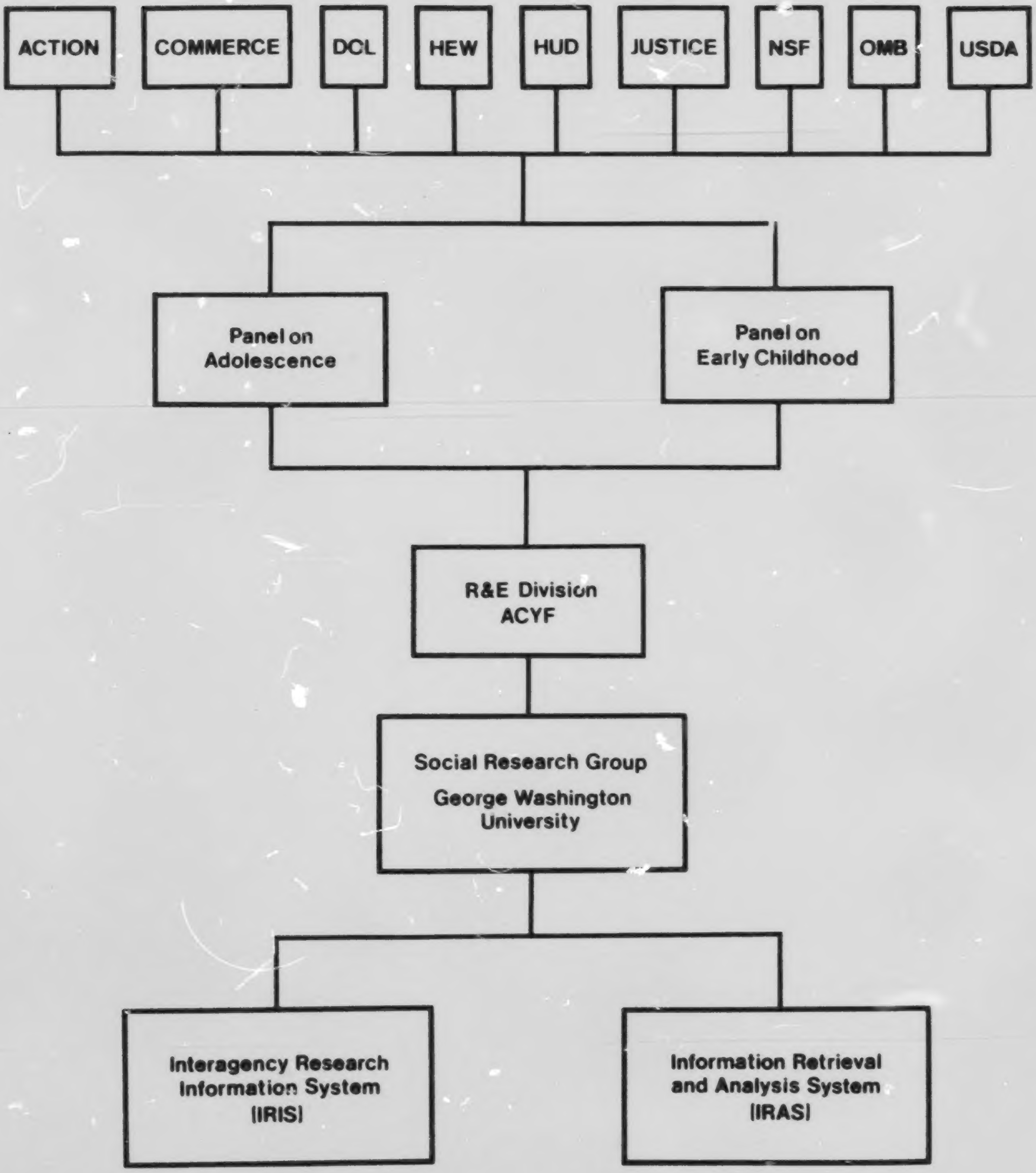
The Early Childhood Panel is chaired by Harold Wallach, Bureau of the Census, and the Adolescence Panel is chaired by William Daniels, Office of the Assistant Secretary for Planning and Evaluation, DHEW. Dr. Edith H. Grotberg, Administration for Children, Youth, and Families, chairs the Executive Committee of the Panels.

The Social Research Group, George Washington University, holds a contract with the Administration for Children, Youth and Families/ Office of Human Development Services, to provide research and support services to the Interagency Panels. The Social Research Group maintains two information systems for the Panels, and as part of its research services prepares documents and reports for the Panels, and aids in the collection, exchange and dissemination of information on research relating to children and youth.

Figure 1 presents a diagram of the basic organization of the two Interagency Panels.

During the year, agency representatives attended regular meetings of the Early Childhood Panel, at which they exchanged information about the planning and funding of Federal research on children. In particular, they identified and discussed research issues and areas of need that cut across the diverse mandates and interests of the agencies on the Panel. These discussions generally were supported by documents and materials contributed by individual agencies, and by analyses of the research information collected and computerized for the Panels. Spedal Panel papers and reports were suggested and planned at these meetings, and subsequently prepared by the staff of the Social Research

Figure 1
Organizational Chart of the Interagency Panels


ACTION
COMMERCE
DOL
HEW
HUD
JUSTICE
NSF
OMB
USDA
Panel on Adolescence
Panel on Early Childhood
R&E Division ACYF
Social Research Group George Washington University
Interagency Research Information System (IRIS)
Information Retrieval and Analysis System (IRAS)

Group. Panel members worked closely with the staff, both in regular meetings and subcommittee meetings, in the development and preparation of these reports. (See Appendix C for a list of papers prepared for the Panels.)

Panel members also frequently set aside time at their regular meetings to hear presentations relevant to child research by individuals from Federal agencies and other organizations. Presentations made during the last year are summarized in the following section.

Presentations to the Panel During FY '77

The Office of Child Development[1]

In October 1976, Dr. Ray Rackley, OCD, presented a report describing the research, demonstration and evaluation programs in the Office of Child Development for FY '76. He discussed seven goal areas supported by OCD's Research, Development, and Evaluation Program: state capacity building; Head Start; child welfare; child abuse and neglect; day care; child care personnel; and child and family development. In addition to these agency goals, priority areas are established each year and statements prepared, describing issues of critical importance to the agency. During FY '76, new research had been started in four priority areas: continuity of development; child development and the family; foster care and adoption services; and major Demonstration Training Grants were awarded in the areas of countering child abuse and neglect. Dr. Rackley described specific projects in several of the goal areas. He informed the Panel about a State model for decision-making which had been adopted by the State of Texas. A workbook had been designed with two major facets: (1) to help information specialists identify the information and analyses they need, and (2) to utilize these for making decisions concerning children. In addition to the overview of FY '76 funding, Dr. Rackley reviewed priority areas in his agency's research plan for FY '77.

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[1] Now named the Administration for Children, Youth, and Families.

The Committee on Evaluation and Information Systems

Dr. Charles M. Sisson, Chairman of the Committee on Evaluation and Information Systems (CEIS) of the Council of Chief State School Officers, spoke to the Panel at a meeting held in December 1976. Dr. Sisson explained that the primary objective of CEIS is to interface with the 22 Federal agencies which collect data from local school districts. Much of the committee's coordination with the government is through the National Center for Educational Statistics (NCES).

CEIS has a coordinator in each state and has a diverse membership on its three subcommittees: Data Acquisition, Management Information Systems Development, and Evaluation Studies. In response to its charge to minimize the data collection impact on local schools, requests for data acquisition in any of the states must clear through one of the subcommittees and meet the final approval of the chief state school officer. Local school officials look toward CEIS approval for any data collection requests, and receive aid with the technical aspects of collecting the data.

Dr. Sisson indicated that CEIS could help researchers and agencies by identifying other projects in a particular area, identifying useful information already collected by a state, and offering advice on instrumentation and documentation.

The Family Impact Seminar

A. Sidney Johnson, Director of the Family Impact Seminar, prefaced his remarks at a February 1977 Panel meeting by mentioning his own optimism about American families and their coping strength, and his belief that they should be looked at in terms of diversity and pluralism. There was, he emphasized, no one category of American family. He told the Panel that the idea of the Seminar grew out of hearings called by Senator Mondale when he was Chairman of the Subcommittee on Children and Youth. Various aspects of early childhood were discussed with the Panel, including the general recognition that the most lasting gains for children are realized when their parents are involved and reinforced in what they already do well. One purpose of the Seminar is to look at ways in which families are changing and at the ability that parents have to adapt. Mr. Johnson cited the increases in women working outside the home and in single parent families, the disappearance of the three-generation family unit, the influence of television, and adult education, as some of the many factors of interest. Mr. Johnson commented on the "myth" that there is no family policy. While a family policy may not be singularly articulated and defined, there are a wide range of public programs which profoundly affect families. For instance, assistance to children and mothers is conditioned on the absence of fathers; there are large health insurance incentives for institutionalization but not home care; and unemployment has large social costs in terms of higher rates in suicide and homicide, heart attacks, and admissions into state mental hospitals.

One of the goals of the Family Impact Seminar is to develop what Mr. Johnson called "a family impact statement" relevant to existing or contemplated public policies. He said that there were profound and complex questions of definition and measurement, and that there was little or no interest in generating a whole new agency to study the family. As a start, the Seminar planned to study the impact of several existing policies. Mr. Johnson expressed interest in coordinating his work with that of the Panels.

The National Institute of Education

At a meeting in March 1977, Dr. Carnot Nelson, NIE, presented data from studies dealing with Federal funding on education, across agencies, in terms of policy and use of resources. The studies focused on educational knowledge production and utilization (KPU), a broad term which includes basic research, applied research, demonstration projects, dissemination, evaluation research, policy research, development of materials and certain statistical activities. The function of a program determined its inclusion as education.

The reports were intended to answer three basic questions:

1. How much is the Federal government spending on education KPU?
2. What kinds of work is the government supporting, in terms of KPU function--basic or applied research? Content? Performing agency?
3. What agencies are supporting which kinds of activities?

He described two of a series of Research and Development System Studies which had been produced. Technical Report #1 used four different data bases (the Interagency Research Information System (IRIS), the National Science Foundation, the Office of Management and Budget, and the National Academy of Sciences) to develop NIE's best estimate of 1975 spending for KPU. TechnicalReport #2 used the program level data base developed by the National Academy of Science for analysis of spending by agency according to activity and function.

Dr. Nelson described another report which dealt specifically with the IRIS data base. About three-fourths of the KPU projects in that system had educational services as a primary focus, and it was found that 78 percent of all educational KPU funds in the file were concerned in some way with curriculum, the main emphasis within curriculum being on basic skills such as math, reading and language arts. Most of the funding was on demonstration projects. Reading was the only major academic area in which at least ten percent of the funds were spent on development. The Social Research Group also carried out a multivariate analysis (using both the Automatic Interaction Detector technique and multiple regression) which identified the relative predictive strength of selected variables concerning agency funding vis-a-vis the activities supported by OE and NIE. The analysis showed that NIE sponsored 90 percent of the projects which did not contain educational curricula, were performed by academic or non-profit performers, dealt with all children, and were basic, general applied, evaluation, policy research or research support studies. On the other hand, OE sponsored nearly 100 percent of the projects which included a special target population, had a primary focus on child development, research methods, and were development and demonstration. The analysis thus clearly showed the separate roles of these two agencies, and the minimal amount of overlap.

The International Year of the Child

At a joint meeting of the Early Childhood and Adolescence Panels on May 17, 1977, Dr. Laurence Wyatt, of the Office of International Affairs, DHEW, and Ms. Carol Galaty, of the Office of the Assistant Secretary of Health, talked to Panel members about the United Nations-sponsored International Year of the Child (IYC), and plans for participation by the United States. For the 20th anniversary of the UN Declaration of the Rights of the Child, the General Assembly adopted a resolution to observe 1979 as the time to assess the conditions and needs of children worldwide and to raise the level of services which benefit them. With UNICEF as the lead agency, the Head of State of each of the member countries was asked to review the country's programs for the well-being of children and to mobilize support for national and local action, according to each country's conditions and priorities. It was hoped that there will be increased awareness of children's special needs among decision-makers and the public, and recognition that programs for children are an integral part of economic and social development. Besides spurring national efforts to bring new dimensions to health, educational, and social services, the IYC should also stimulate research on the needs of children and encourage dissemination of research on child-related issues.

DHEW was asked to coordinate the United States national effort with the State Department, voluntary and nongovernmental groups, and other government agencies, to make the observation of the year as effective as possible. While the emphasis is being placed on action at the national level, and a worldwide conference is not planned, simultaneous efforts of cooperation with other countries and international groups are expected to have global impact.

It was suggested that the IYC might link two other national events which are of special interest to the Interagency Panels for Research and Development on Early Childhood and Adolescence: the 1979 White House Conference on the Family and the 1980 Decennial Conference on Children and Youth.

Ms. Carol Galaty outlined three categories where action needed to begin: developing an administrative structure and an agenda for the United States; setting a theme and assessing current Federal, State and local programs for children; and making suggestions to UNICEF for international activities. The Panel members discussed ideas for national and international activities and for possible roles of the Panels within the United States' effort. Among the suggestions were: (1) the introduction of a formal mechanism between nations for youth information exchange; (2) an international intern program; (3) energy education; (4) exchange of technology; and (5) the development of a "social inventory" of other countries to learn about child care, family support systems, and the intergenerational nexus.

The Institute for Educational Leadership

At their June meeting, Panel members hears a presentation by Mr. Noel Epstein, a staff writer for the Washington Post who was then on leave at the George Washington University's Institute for Educational Leadership. Mr. Epstein, who had just written an article on bilingual education for the Washington Post, spoke to the Panel about the journalist's problems in reporting social science research, and about the scientific and political roles of social scientists in today's complex society. He raised questions in particular about how research issues and questions are selected, how research data are used to make policy decisions, and how findings are reported to the public. Mr. Epstein suggested that social scientists could influence social policy most effectively by sorting out and defining relevant research questions, and by identifying issues that are both important and researchable.

The National Institute of Neurological and Communicative Disorders and Stroke

At a joint meeting of the Early Childhood and Adolescence Panels, July 19, 1977, Dr. Sarah Broman, NINCDS, described preliminary findings of the NINCDS perinatal project. Dr. Broman reported on three ongoing studies of longitudinal data from the Collaborative Perinatal Project. In a population of over 40,000 children followed from the prenatal period, developmental factors associated with the following adverse outcomes at age 7 were being examined: mental retardation, learning disorders, and minimal brain dysfunction.

The incidence of severe retardation (0.5 %) did not differ by ethnic group in this study population, but mild retardation was more frequent among non-whites (5%) than whites (1%). The incidence of mild retardation, and to a lesser extent severe retardation, decreased as social class increased. Among the severely retarded children, three-fourths of the whites but only one-half of the non-whites had major neurological problems. From 6 to 14 percent of the mildly retarded children also had major neurological problems. In general, the proportion of retarded children with major neurological involvement increased as social class increased. Early predictors of retardation included signs of perinatal anoxia and psychomotor test scores in infancy.

In a study of learning disorders at age 7, low achievers were compared with their IQ-matched academically successful controls on indices of cognitive and physical development and family characteristics. Widespread cognitive deficits and behavioral deviations were found in the pre-school period. Indices of socioeconomic status and family structure were more strongly related to low achievement than were indices of physical development and medical status. In a related study, a factor analysis of 25 possible signs of minimal brain dysfunction defined factors representing school achievement, hyperkinetic-impulse disorders, social immaturity, and minor neurological problems. Children with symptoms in more than one area were more common than would be expected if there were no association among symptoms, although most children who had problems in one area did not have problems in the other areas. Significant association of the factor scores have been found with socioeconomic, perinatal, and developmental variables.

The Developmental Continuity Consortium

At the joint Panel meeting in July, Dr. Irving Lazar and Ms. Ruth Hubbell, Cornell University, reported to the Panels on positive effects of early intervention programs on development during childhood and adolescence. Much of this evidence was generated by a number of studies which were initiated in the 1960's and recently organized into the Developmental Continuity Consortium. The Consortium, funded by the Office of Child Development through the Education Commission of the States, enabled the principal investigators of these studies to pool their original data, and to collect comparable data on the current status of the children who had participated in the earlier programs.

The programs carried out by twelve independent investigators fall into three categories: (1) Preschool Center-Based Programs; (2) Infant Home-Based Programs; and (3) Preschool Combination Home and Center-Based Programs. Most of the children who participated in the programs were from low-income families. Recently, the investigators involved in these studies sought out the children who had been part of the programs and collected data on their present school progress and their feelings about the programs in which they had participated. They also interviewed the parents of the children in order to assess their attitudes toward the programs.

Preliminary analyses indicated that the percentage of program children placed in special education classes was lower than the percentage of the control group. It was also noted that program children were held back a grade less frequently than control children. Parental evaluation of the preschool programs was favorable. Parents felt that the programs were good for their children, and preferred the particular delivery systems used with their own children.

The researchers also asked the children how they felt about themselves, as well as other aspects of their lives. The findings indicated that on the whole these children were sociable, involved in the community, made use of the public media, got along well with their families and participated in family activities. As for the future, a larger percentage of program children wanted to become professionals than children in the control group. Dr. Lazar concluded that early intervention programs did appear to make a difference in the "long run," and suggested that further research was needed to find out how preschool programs help what kinds of children, in what kinds of circumstances and under what kinds of conditions.

The Survey on Income and Education

In August, Mr. Gordon Green, Dr. Lawrence Suter, and Mr. Arno Winard of the Bureau of the Census, and Mr. Les Silverman of the National Center for Educational Statistics discussed a recent large-scale survey of income and education which was mandated by Congress in the 1974 Educational Amendment. The primary purpose of the survey was to estimate the number of children living in families with incomes below poverty level by state. Authorization was also given to evaluate ways to effectively update the estimates. The survey, conducted by the Census Bureau in conjunction with agencies of the Department of Health, Education, and Welfare, was carried out between April and July 1976.

The Survey on Income and Education (SIE) was organized to meet other legislative requirements such as: (1) estimating the number of children and others of limited English-speaking ability who are in need of bilingual education, guidance and counseling; (2) additional data on incomes; and (3) the feasibility of updating estimates of the number of poor children in school districts in order to review and make needed adjustments in grants to local educational agencies.

Survey materials consisted of a control card and a 20-page questionnaire, which was composed, in part, of questions taken from the Current Population Survey questionnaire (work-related), as well as questions that dealt with health coverage, disability, school enrollment, language background, and English language capability.

The study to evaluate the survey's accuracy was composed of two parts: content studies and coverage studies. It was designed to measure the accuracy of data on children in poverty, biases in the original survey and whether these biases, if existing, would affect the distribution of funds. The evaluation study survey reinterviewed 8,600 of the original households. The data were collected in an entirely different manner than in the original study. It was noted that the most noticeable finding of the SIE was the reduction in the number of poor children 5-17 years of age in the South.

The Panel was urged to view all the figures from the SIE not as absolutes, but to consider standard errors when tabulating the data. It was noted that data tapes would soon be available for public use.

The Smithsonian Conference on Kin and Communities

At the October meeting of the Panel, Dr. Wilton Dillon, the Smithsonian Institution, and Dr. Allan Lichtman, Department of History, American University, reported on the 1976 and 1977 Smithsonian-sponsored conferences on Kin and Communities. Dr. Dillon noted that the Smithsonian's aim was to diffuse knowledge. The conferences brought together individuals from different disciplines and activities to discuss the roles of families in the settlement and development of our nation. The conference participants attempted to determine what life was like for our forefathers, and how families' histories might illuminate our linkage to the Old World, in order that we might gain a more comprehensive view of our society today. The need for communication among disciplines, scholars and the general populace was emphasized.

Dr. Allan Lichtman discussed the ways in which the use of an historical perspective might aid in understanding and solving pressing problems today. He noted that: (1) an accurate depiction of the past can shed more light on the present and help us anticipate the future; (2) our perception of history, in part, shapes the views and ideas we hold; (3) an historical approach expands our humanistic point of view; (4) an historical approach can help us discover what aspects of theory and common sense are historically conditioned. The discipline of history is beginning to focus more attention on ordinary people and everyday experiences. It was noted that historians have been aided by the social sciences in developing an understanding of the families who shaped our country. Conversely, history has provided an additional testing ground for the social sciences.

The conferences brought to light some of the problems in historical research on families, which included: What does one assume and what does one test? To what degree do present-minded concerns guide scholars? How does one deal with short-term factors in historical development? How does one deal with the fragmentary nature of historical data? How does one communicate findings to a large audience efficiently?

Bureau of the Census

At the Panel meeting in November 1977, Ms. Karen Crook, Population Division, Bureau of the Census, previewed a report entitled Characteristics of American Children and Youth. The report, which was released in January 1978, is the first of this nature to be published by the Bureau of the Census on children. The majority of information contained in the report is based on data collected by Census in current population surveys and decennial censuses of population. Other contributing government agencies include: Bureau of Labor Statistics; the National Center for Health Statistics; the Center for Disease Control; the Law Enforcement Assistance Administration; the National Center for Education Statistics; and the Office of Education.

The report, which focuses on the population under 25 years of age, defines children as persons under 14 years of age, and youth encompasses the age range 14-24 years old. It provides an historical perspective of the current socioeconomic situation in which children and youth develop. Selected topics are examined in time series beginning in 1950; trend data for other subjects are presented for a more recent time span. There are nine chapters in the report which cover: Population Growth and Distribution; Education; Marital Status and Living Arrangements; Fertility, Mortality and Health; Labor Force and Employment Status; Income and Poverty Status; Voting; Crime, Victims and Offenders.

Ms. Crook reviewed highlights from each chapter of the report. As of

July 1, 1976, the number of children under 14 was 48.3 million, but as a result of the decline in fertility over the past decade and a half, children have become a steadily decreasing proportion of the total population. It is projected, however, the the number of children in the population will increase again by the year 2000.

Also discussed were mortality, health, and fertility rates, school enrollment figures, and living arrangements, the latter varying greatly by race and origin. Accidents were noted as the leading cause of death for children and youth in 1975. Employment statistics of the youth labor force were cited. A rise in the labor force is expected through 1979, followed by a decline in the 1980's.

The Family Impact Seminar (II)

In December, a progress report on activities of the Family Impact Seminar was presented to the Panel by Dr. Ruth Hubbell. Over the course of the previous year and a half, the Seminar had been engaged in reviewing the feasibility of developing a process to study the impact of public policy on families. Their goals were to develop the tools to carry out a study of this nature and then to compile these tools. Dr. Hubbell indicated that an interim report of the Family Impact Seminar was due shortly, which would describe the framework the Seminar had developed. The report would also contain sections on: values; an analytic framework for studying different policies; and the types of data needed for family impact analysis.

The Seminar members had selected two areas of concern to apply to the framework they had developed. They were government as employer (particularly the effects of flexible hours on family lives of government workers), and foster care (an analysis from the perspectives of the biological, foster and potential adoptive families at the Federal, State and local levels). It was anticipated that the analyses would be completed by June.

Dr. Hubbell noted that the Seminar had completed a work entitled "Toward an Inventory of Federal Programs with Impact on Families." She also mentioned that a survey was in progress dealing with attitudes of different ethnic groups on foster care and teenage pregnancy. Suggestions from Panel members were encouraged on the status and needs of Federal data collection efforts related to families.

The Committee on Child Development Research and Public Policy

At the January 1978 meeting of the Panel, Dr. John Butler and Eileen Blumenthal, NAS, described the structure of the National Academy of Sciences and the establishment of the Committee on Child Development Research and Public Policy. This recently established standing committee under the National Research Council, Assembly of Behavioral and Social Sciences, has the following purposes: to synthesize research pertinent to the formulation and implementation of social policy concerning children and families and to propose ways of increasing its applicability to policy makers and program managers; to propose and aid coordination of ongoing research in behavioral and social sciences related to problems of children and families; to develop agendas of needed research for agencies and researchers; and to prepare reports in the areas of concern ranging from highly technical to broader issues. The committee wants to draw on the expertise of people who have had experience in the processes of policy formation and to provide linkage between the policy-makers and those knowledgeable about social science bases. Dr. Butler indicated that core support for the Committee was being provided by the Foundation for Child Development.

One panel of the Committee had been formed and charged with the task of designing several case studies of the process of policy formation at the Federal level where the major impact is on children and families. This panel was being funded by the Administration for Children, Youth and Families. Dr. Butler acknowledged that the Committee hoped to establish several panels in the future. Among the interests of the Committee were areas such as: (1) adequacy of data on children's services; (2) status offenders and dependent and neglected children in institutions; (3) legislation affecting children; and (4) welfare reform and effects on children and families.

The Information Systems

The Interagency Research Information System (IRIS)

The Interagency Panel on Early Childhood Research and Development established a computerized data system in 1970 which facilitated the sharing of information and encouraged the coordination of planning among the member agencies. In 1972 the Early Childhood Panel was joined by the Interagency Panel for Research and Development on Adolescence. Separate data banks were maintained until 1973, when a joint system was formed. The Interagency Research Information System (IRIS) features a unique and expanding data file on early childhood and adolescence research projects funded by member agencies across the Federal government. The number of requests for information from IRIS has increased steadily over the years, as knowledge of the system has become more widespread. Numerous requests have been answered for Panel member agencies, other Federal agencies, Congressional committees, universities, foundations, institutes, and individuals. During FY '77, special efforts were made by the Panels to familiarize individuals in Federal agencies with the various ways in which IRIS can be used.

IRIS currently contains information about 4,998 ongoing Federally funded projects ($474.0 million) relating to children and adolescents. In the early years of the Panel, agency representatives classified their own agency's projects and that information became the basis of the computerized data bank. Since then, however, the data collection and computerization effort has grown considerably, and the Panels' support staff now collects information directly from agency files about the individual research projects active during the last fiscal year. The team prepares an abstract of each project, and classifies and codes salient aspects of the approach, procedure and content area of the project, using a set of descriptors developed by the Social Research Group in conjunction with the Panels. The coded information is then entered into the computerized data bank.

Two basic kinds of information can be retrieved by users of the system: (1) numerical and (2) literal. The numerical information includes counts of projects and amounts of funding (in percentages). This numerical information can be retrieved for individual categories of research, or it can be retrieved in table form directly from the computer. For instance, a user can ask for a table showing data on research projects on the family, broken down by agencies and kinds of research (basic, applied, etc.) as shown in the photocopy of an actual print-out in Figure 2.

In addition, literal information can be obtained, which includes the titles of projects, the names and addresses of the principal investigators, and abstracts of the project proposals. In contrast to previous years, project abstracts can now be obtained directly on the computer print-out, and do not have to be photocopied from file copies.

In addition to abstracts of project proposals, summaries of findings of some terminated and continuing projects are now available to users of IRIS. These summaries are obtained through questionnaires sent to the principal investigators of projects funded by the member agencies. Table 22 shows the number and distribution by area of the findings in IRIS.

A request for information about the data system projects may be made in writing or by telephone to:

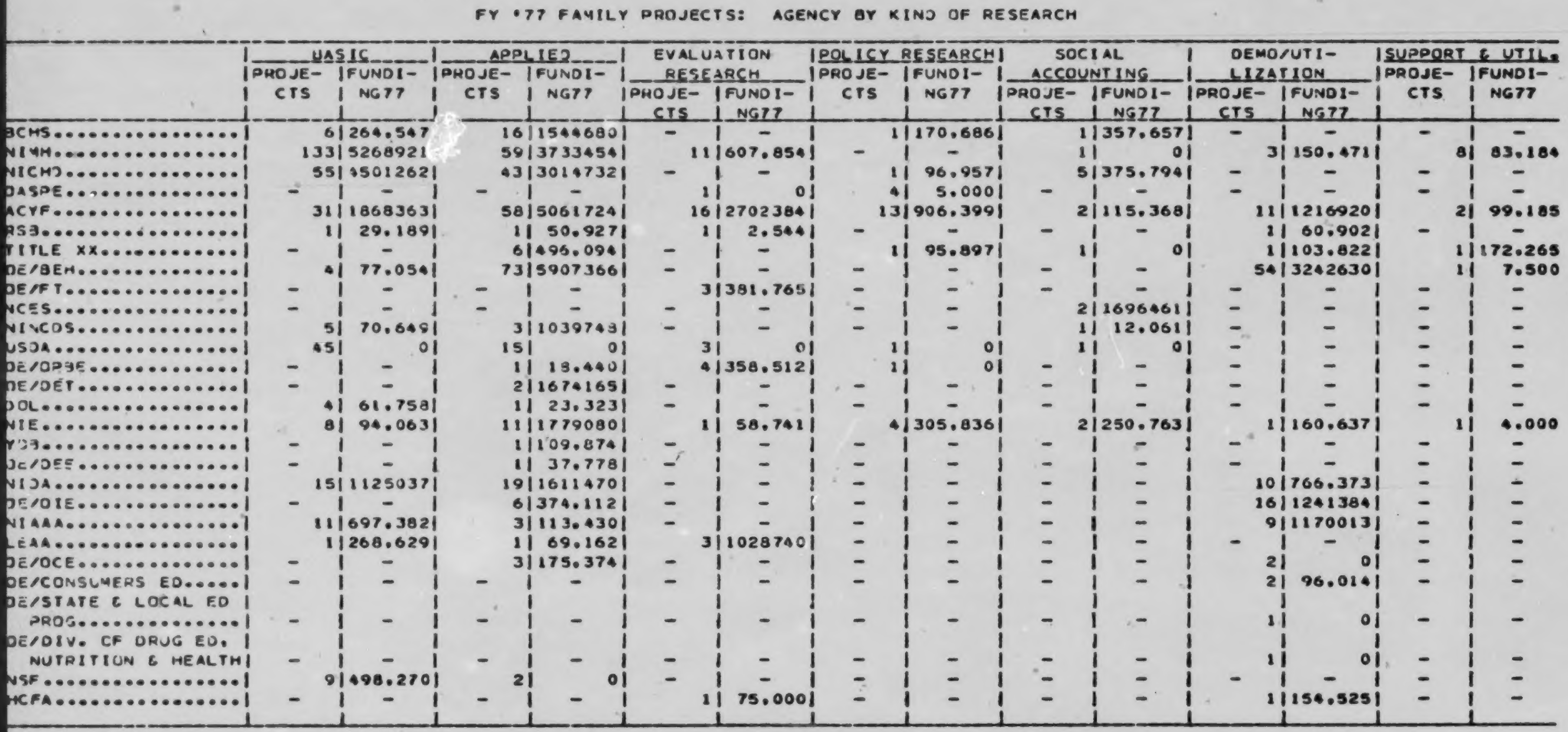
Social Research Group, G.W.U.
Attn: IRIS/IRAS
2401 Virginia Avenue, N.W.
Washington, D.C. 20037

In general , the more clearly defined the request, the more relevant the response to that request. The request should specify areas of interest (e.g., use of psychotherapy on preschool children) and, if possible, areas in which there is no interest (e.g., no basic research projects). Users of IRIS are advised to consult this annual report and the annual report of the Adolescence Panel first. These reports present a large number of tables breaking down the FY '77 projects by various areas, approaches, and categories, and will provide the user with an estimate of the amount of research activity in a particular area of interest, and will acquaint the user with the various ways in which the information in IRIS is classified.

The general policy of both Panels is that all information in the data bank should be made available to whomever makes a request. In recent years the number of requests for information from interested agencies and from persons outside the Federal government has increased steadily. Because of this increase, requests from non-Federal government sources must

Figure 2

Reduced Photocopy of IRIS Print-out



FY '77 FAMILY PROJECTS: AGENCY BY KIND OF RESEARCH

	UASIC		APPLIED		EVALUATION RESEARCH		POLICY RESEARCH		SOCIAL ACCOUNTING		DEMO/UTILIZATION		SUPPORT & UTIL.	
	PROJECTS	FUNDING77	PROJECTS	FUNDING77	PROJECTS	FUNDING77	PROJECTS	FUNDING77	PROJECTS	FUNDING77	PROJECTS	FUNDING77	PROJECTS	FUNDING77
BCHS	6	264,547	16	1544680	-	-	1	170,686	1	357,657	-	-	-	-
NIMH	133	5268921	59	3733454	11	607,854	-	-	1	0	3	150,471	8	83,184
NICHD	55	4501262	43	3014732	-	-	1	96,957	5	375,794	-	-	-	-
OASPE	-	-	-	-	1	0	4	5,000	-	-	-	-	-	-
ACYF	31	1868363	58	5061724	16	2702384	13	906,399	2	115,368	11	1216920	2	99,185
RSB	1	29,189	1	50,927	1	2,544	-	-	-	-	1	60,902	-	-
TITLE XX	-	-	6	496,094	-	-	1	95,897	1	0	1	103,822	1	172,265
OE/BEH	4	77,054	73	5907366	-	-	-	-	-	-	54	3242630	1	7,500
OE/FT	-	-	-	-	3	381,765	-	-	-	-	-	-	-	-
NCES	-	-	-	-	-	-	-	-	2	1696461	-	-	-	-
NINCDS	5	70,649	3	1039748	-	-	-	-	1	12,061	-	-	-	-
USDA	45	0	15	0	3	0	1	0	1	0	-	-	-	-
OE/OPBE	-	-	1	18,440	4	358,512	1	0	-	-	-	-	-	-
OE/DET	-	-	2	1674165	-	-	-	-	-	-	-	-	-	-
DOL	4	61,758	1	23,323	-	-	-	-	-	-	-	-	-	-
NIE	8	94,063	11	1779080	1	58,741	4	305,836	2	250,763	1	160,637	1	4,000
YSB	-	-	1	109,874	-	-	-	-	-	-	-	-	-	-
OE/DEE	-	-	1	37,778	-	-	-	-	-	-	-	-	-	-
NIDA	15	1125037	19	1611470	-	-	-	-	-	-	10	766,373	-	-
OE/OIE	-	-	6	374,112	-	-	-	-	-	-	16	1241384	-	-
NIAAA	11	697,382	3	113,430	-	-	-	-	-	-	9	1170013	-	-
LEAA	1	268,629	1	69,162	3	1028740	-	-	-	-	-	-	-	-
OE/OCE	-	-	3	175,374	-	-	-	-	-	-	2	0	-	-
OE/CONSUMERS ED	-	-	-	-	-	-	-	-	-	-	2	96,014	-	-
OE/STATE & LOCAL ED PROG	-	-	-	-	-	-	-	-	-	-	1	0	-	-
OE/DIV. OF DRUG ED, NUTRITION & HEALTH	-	-	-	-	-	-	-	-	-	-	1	0	-	-
NSF	9	498,270	2	0	-	-	-	-	-	-	-	-	-	-
HCFA	-	-	-	-	1	75,000	-	-	-	-	1	154,525	-	-

be fulfilled on a cost-reimbursement basis.

The Information Retrieval and Analysis System (IRAS)

The Information Retrieval and Analysis System (IRAS) was developed to compile existing data on children and to permit retrieval of data relevant to user requests. IRAS contains substantial data pertaining to target groups and demographically defined populations, and services with a major emphasis on children. By one count, there are more than 1,200 Federal and Federally sponsored sources of information; by another count, which includes proprietary sources, there are over 1,800. Because information relevant to a given issue, decision, policy, or research topic typically spans multiple sources, types, and forms of information, its utilization poses a difficult practical problem.

IRAS has been designed and implemented in stages, beginning approximately four years ago. Its primary purpose is to complement IRIS, by identifying, acquiring, and analyzing information, much of which is numeric or statistical in nature. Because information sources which IRAS draws upon typically provide both bibliographic and numeric or statistical information, IRAS has been expanded to include and make available to users four types of information: (1) numeric/statistical; (2) narrative/bibliographic; (3) abstracts; and (4) references/citations. In addition, it is possible on special request to acquire documents for which only abstracts, references, or citations are available through existing public or private sources.

IRAS is a custom research data bank, that is, a data bank where searches or products are tailored to the requirements of the individual researcher or other user. IRIS descriptors may be used, although with requests for statistics or numeric data, additional descriptors should also be used. Most documents in IRAS are full-text, hard copy. Many are documents difficult or impossible to find from other sources. Copies can be made of these documents or the relevant portions, as appropriate. Many of the information sources utilized by IRAS provide only references, citations, or abstracts, and do not provide full text. In many instances, however, IRAS can acquire selected documents in response to a user request. Another major feature of IRAS is the emphasis on analysis, in addition to mere retrieval of information. Routine analyses include retabulating or reformatting data to highlight the points of primary concern to the researcher or user. For example, tabular data are often converted to an easy-to-read graphical format for the user. Additional analytic services are available on a special request basis.

Outreach Activities

The Panels continue to involve in their activities interested individuals and groups from the Federal government and the general research community, both as sources of expert advice and as consumers of the information they collect and synthesize. As in previous years, during FY '77 the Panels tried to accomplish this through invitational conferences, presentations at professional societies, and publications in journals and newsletters. Over the years, Panel-related reports, editorials, and statements have appeared in Child Development, the Courier (a publication of the International Children's Center), the American Educational Research Journal, the newsletter of the American Vocational Educational Research Association, the Educational Research Manager, the Journal of Youth and Adolescence, the newsletter of the Society for Research in Child Development, and the newsletter of Division 7 of the American Psychological Association.

Discussions and symposia have been sponsored by the Panels at the annual meetings of organizations such as the American Psychological Association, the Eastern Psychological Association, the American Educational Research Association, and the American Orthopsychiatric Association.

Previous conferences convened in Washington by the Interagency Panels have focused on a variety of issues, including: (1) research on the family; (2) comparability in research from the perspective of journal editors; (3) comparability in research from the perspective of university deans and professors in charge of graduate training programs;

(4) research and policy needs at the state level; (5) the ecology of child development; and (6) youth participation.

In 1977, an article examining the frequency and quality of measures used in Federally sponsored research on children and adolescents (Heyneman & Mintz, 1977) was published in the American Educational Research Journal. In April, 1977, a study of the description of samples in research literature relating to children and adolescents (Hertz & Hurt, 1977) was presented at the 48th Annual Meeting of the Eastern Psychological Association.

Stephen Heyneman, previously with the Social Research Group and now with the World Bank, chaired a session on "The Resurgence of Research in Adolescence," and presented a paper on "The Resurgence of Responsibilities in the Raising of Adolescents" at the annual meeting of the American Educational Research Association, held in New York City in April, 1977. William Daniels, OASPE, also participated in that session, and presented a paper on "The Federal Government: Future Trends in Adolescence." An article based on Dr. Heyneman's presentation, "Adolescence Obligations and Educational Policy," will appear in a 1978 issue of The American Biology Teacher.

Maure Hurt, Jr., and Ada Jo Mann, of the Social Research Group, and Carol McHale, an Early Childhood Panel member from the Office of the Assistant Secretary for Planning and Evaluation, DHEW, participated in the Office of Child Development Conference on Parents, Children, and Continuity, which was held in El Paso, May 23-25, 1977. Their session, entitled "Governmental Research on Children," consisted of an explanation of IRIS, the Interagency Panels' information system, by Dr. Hurt, a synopsis of recent findings in research on infants, by Ms. Mann, and a discussion of Federal funding of research, by Dr. McHale.

The Status of Children

The Status of Children 1977[2] is the second biennial report on children. The previous report, prepared in 1975, was the first attempt to compile and describe statistics from a wide variety of both Federal and non-Federal sources pertaining to children, and to the conditions, trends, and programs that affect them.

The Status of Children 1977, in addition to describing current statistics, provides updates of the statistics analyzed in the previous report and describes certain historical trends. In this sense, the current report may stand alone as a reference document. However, the 1977 report also includes significant expansions on many topics covered in the 1975 report. Further, the statistics reported in the individual tables and figures have been expanded to permit more detailed levels of analysis or cross-tabulation. The basic purpose, however, remains the same: to present information pertaining to children, and to discuss the implications and the use of such information in planning for children.

The Status of Children 1977 is divided into three distinct but conceptually interrelated parts. Part A examines basic trends essentially from a demographic perspective. Chapter 1 focuses upon trends in the general population and upon components of growth in the population. Chapter 2 has a similar orientation, but focuses on the family.

Part B describes the status of children, conditions affecting them, and programs designed to benefit the family and children. Chapter 3 begins where Chapter 2 "left off"--with the family. It attempts to describe some of the conditions of families which may place children at risk, and then turns to a description of some key programs providing human development services. Chapters 4 and 5 examine some selected issues in health and education, as well as developmentally-oriented programs with health or education as a primary focal point.

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[2] This description is taken from the introduction of The Status of Children 1977, written by Kurt J. Snapper and JoAnne Ohms.

Part C discusses in detail the use of information, with an emphasis on the use of information about children for decision making. Chapter 6 discusses past critiques of information utilization, but is primarily devoted to describing three case studies on the use of information pertaining to children. Chapter 7 discusses some of the tendentious issues about more efficient and effective future use of information. Dissemination/acquisition processes and the use of information in the analysis of decisions are discussed.

The International Year of the Child

The Interagency Panel on Early Childhood Research and Development and the Interagency Panel for Research and Development on Adolescence have proposed a jointly sponsored project to the International Year of the Child Committee for its consideration. This project is unique in its contributions to information on Federally funded research for the well-being of children. The members of the two Interagency Panels, who share their plans and data on agency sponsored RDD&E projects as a part of their regular activities, propose to broaden this activity under the aegis of the International Year of the Child to all who have an interest in improving the well-being of children via research.

The project will involve: (1) document development and dedication; (2) information services; and (3) dissemination efforts in the form of conferences and meetings.

Documents

Annually each Panel issues a report on the status of research and development in its area of interest which presents current research issues, agency activities and future directions. These documents will be developed with IYC goals in mind and available to interested individuals with the objective of furthering these IYC goals.

The Status of Children 1979 will provide an overview of children in the United States from many different demographic perspectives, again dedicated to IYC objectives.

Methodology and instrumentation are critical to the conduct of research for children. The Panels propose to publish a document which would provide the reader with a directory to methodologies and instruments used in projects funded in FY '77 and FY '78. A fourth document would be a collection of abstracts of projects funded by the Interagency Panels dealing with cross-cultural studies reflecting the objectives, methodology, subjects and instrumentation of each of the studies.

All of these documents will be available to the IYC organizations and the Interagency Panels would encourage any international organization wishing to develop translations to do so.

Information Services

The information services of the Joint Panel IYC Project will be conducted by the Interagency Panels' support staff which will serve as a contact point for IYC visitors wishing information on Federally sponsored RDD&E projects via the Interagency Research Information System (IRIS). This system contains abstracts of approximately 5,000 projects devoted to RDD&E for children and adolescents. The staff will also develop a directory for IYC visitors which offers information on Federal agencies dealing with various aspects of research and children and youth together with key people in those agencies and their professional areas of expertise.

Several agencies maintain intramural information systems as a part of their activities that may be of special interest to IYC visitors. A directory to these systems will be created as a part of the Joint Panel IYC Project for the use of IYC participants.

Meetings and Conferences

The Interagency Panels share with the IYC similar goals and interests. The meetings of the Panels will, no doubt, be of interest to IYC participants and visitors from other countries. Invitations will be extended to those individuals to visit, indeed take part in, the meetings of the Panels as they pertain to common interests. A conference is planned which will complement IYC activities planned by other project sponsors and by IYC organizations, drawing on the unique capabilities and resources of the Interagency Panels.

Information Utilization in FY '77

Since the Early Childhood Panel was formed in July 1970 and the Adolescence Panel two years later, a computerized information system has been maintained to classify current research on early childhood and adolescence. In addition to providing support to the Interagency Panels and their member agencies, information from the system is available to members of the research community on a cost-reimbursable basis.

This Interagency Research Information System (IRIS) has been used by Federal agencies for different purposes, which include the following: (1) to survey ongoing research in a particular field prior to developing their own initiatives; (2) as a convenient way to respond to routine requests for information concerning their own projects; (3) to indicate to their contractors and grantees how they might enhance comparability across projects; and (4) to analyze information across Federal agencies on research efforts for children and youth in general and specific target populations. In addition to fulfilling these and other informational needs, the Social Research Group produces and distributes publications and documents under the Panels' direction.

The following figures help to illustrate the use of the Panels' resources. During 1977 the Social Research Group disseminated 7,240 publications to members of the Panels, other Federal, State, and local decision makers and members of the research community. Included in this figure were requests for many of the older documents published by the Panels as well as the several new reports completed during the course of the year. Requests for computer-generated lists of projects titles and complete project abstracts which provide information on the objectives, methodology, sample and instrumentation of each project were extensive. Approximately 20,150 abstracts were distributed between July 1976 and September 1977 in response to requests from Federal and non-Federal organizations. Distribution of informational items such as working papers, minutes of meetings, agendas and memoranda resulted in 3,575 mailings. Therefore the total number of mailings between January and December was 11,815.

CHAPTER II

THE PANEL'S THEME: CHILD DEVELOPMENT AND THE FAMILY

The Interagency Panel consists of many Federal agencies with diverse mandates, interests, and approaches to research. For some, such as the National Institute of Child Health and Human Development, childhood represents a predominant focus of their research efforts, while for others it may be one among many major foci, or even a relatively minor aspect of the agency research program. When this diversity of interests among the membership is considered together with the breadth of the Early Childhood Panel's domain--which includes virtually any kind of research and development relating to children--it is not surprising that the Panel members cannot begin to follow up on all of the interests which surface at their regular meetings.

The Theme as an Aid in Coordination

As a way of maximizing their effectiveness and promoting coordination across the broadest possible base of agencies, Panel members have concentrated on general research areas and approaches that most merit continued or increased support from the Federal government. General categories which over the years have received special attention from the Panel include: (1) applied and basic research; (2) global research; (3) research to benefit all children; (4) longitudinal research; (5) research methodology; (6) research on developmental processes; (7) research on the family; and (8) research on the community and society. In addition, Panel members usually have worked with a general theme to provide further cohesiveness to their discussions and activities. The Panel selects a theme which will pull together several key research areas and approaches, and provide common ground for discussion among the many agencies, yet at the same time be comprehensive enough to accommodate the agencies' diversity of interests. Previous Panel themes have included family research, comparability of research, and ecological approaches to research on child development.

A Previous Panel Theme

At the beginning of FY '77, more than a year of efforts in exploring the theme of ecological approaches to research on child development culminated in the publication of two Early Childhood Panel reports. The first presented the proceedings of the Panel-sponsored Symposium on Ecological Approaches to Research on Child Development, held in Washington, D.C., on September 27th and 28th, 1976. The purpose of the conference was to clarify the requisites, limitations, and potential of the ecological approach to research on child development.

The program began with introductory remarks by Dr. Edith Grotberg, the Panel chairperson, and with a keynote address by Dr. Urie Bronfenbrenner, Cornell University, on the experimental ecology of human development. The remaining portion of the program was divided into three roundtable discussions which focused on: (1) ecological research--theoretical considerations; (2) ecological research--methodological considerations; and (3) research directions--past, present, and future. Six representatives of the Interagency Panel and ten invited research and policy experts from around the country served as resource persons for these discussions. In addition, a large number of persons from the Interagency Panels, Federal agencies, universities, and other institutions attended the Symposium and participated in the discussions. The proceedings of the conference (Hertz, 1976) can be obtained from the Social Research Group at The George Washington University.

The second report, entitled "The Ecology of Child Development: Research Issues," presented a matrix within which research issues could be categorized according to four major systems in the child's ecology: (1) the developmental processes; (2) the family; (3) the broader social and physical environment; and (4) services and intervention programs. Various kinds of information were categorized within these matrices. The report indicates how Federally supported projects were distributed across the areas defined by the matrix (e.g., how many projects focus on the child and the family, or the family and services?). In addition, specific research issues in which member agencies were interested were listed in the particulr areas identified by the matrix. This report can also be obtained from the Social Research Group.

A New Panel Theme: Child Development and the Family

After the publication of the proceedings of the Symposium on Ecological Approaches to Research on Child Development, and the work statement on ecological research issues, the Early Childhood Panel decided to work with a theme which would retain the emphasis on the child's family and ecology, but allow new emphases as well. Designating this theme as child development and the family, Panel members identified four perspectives which would receive special attention in their future discussions, activities and documents: (1) developmental; (2) ecological; (3) preventive; and (4) strength-oriented. These perspectives are described below.

The Developmental Perspective

> . . . development generally refers to a phenomenon which involves a change in form or organization over time. This change is in the direction of relatively simple to more complex forms; it usually proceeds through stages and transitions between stages; and it is viewed as relatively irreversible. The force behind the change is felt to come from maturational factors within the organism as well as from an interchange between such factors and environmental stimulation. (Charlesworth, 1970, p. 2)

According to the developmental perspective, a phenomenon can be more thoroughly understood by examining its developmental course. Central to this perspective is the recognition that the child's current physical, intellectual, and social condition has been influenced by the child's biological make-up, cultural and environmental context, past experiences and previous developmental changes.

> It requires that behavior be looked at in terms of greater time spans than minutes, hours, or days . . . . At first glance this feature may seem relatively insignificant, but it is not. It means that the developmentalist, like many biologists, must perforce work both in a context of history (ontogenetic as well as phylogenetic) and in a context of continual change. This change does not only involve the gradual accumulation of experiences and subsequent alterations of behavior, but also alterations in the total physical substrata which mediate such behaviors. (Charlesworth, 1970, p. 4)

There is a general sensitivity to differences in the processes and needs which obtain at various ages and stages of development, although specific interpretations of these differences may vary with the particular theories of development espoused. Well-known theories of development include Freud's psychoanalytic theory, Erikson's psychosocial stage theory, and Piaget's theory. While these particular theories are primarily psychological, the developmental perspective necessarily subsumes a variety of disciplines, such as philosophy, biology, ethology, anthropology, sociology, as well as psychology.

The Ecological Perspective

> The ecology of human development is the scientific study of the progressive, mutual accommodation, throughout the life span, between a growing human organism and the changing immediate environments in which it lives, as this process is affected by relations obtaining within and between these immediate settings, as well as the larger social contexts, both formal and informal, in which the settings are embedded. (Bronfenbrenner, 1977, p. 514)

Within the field of child development, the ecological orientation encompasses many approaches to research. These approaches may differ along various dimensions of the research process, including the theoretical underpinnings of research, the methodology of research, the focus or content of research and even the role of research with regard to social needs and social policy. That is, ecological studies may focus on different issues and phenomena, draw on different theoretical models, and employ different research methods and instruments. They reflect a common concern, however, for not just the child, family and environment in themselves, but the ecology of childhood--the systems through which children and the people, institutions and physical and social circumstances in their lives are interrelated.

Bronfenbrenner (1977), who is one of the chief advocates of the ecological orientation within the field of child development, conceptualizes the ecological environment as a nested arrangement of structures, each contained within the next: the microsystem, the mesosystem, the exosystem, and the macrosystem. He defines these successive levels as follows:

> 1. A microsystem is the complex of relations between the developing person and environment in an immediate setting containing that person (e.g., home, school, workplace, etc.). A setting is defined as a place with particular physical features in which the participants engage in particular activities in particular roles (e.g., daughter, parent, teacher, employer, etc.) for particular periods of time. The factors of place, time, physical features, activity, participant and role constitute the elements of a setting.
>
> 2. A mesosystem comprises the interrelations among major settings containing the developing person at a particular point in his or her life. Thus, for an American 12-year-old, the mesosystem typically encompasses interactions among family, school, and peer group; for some children, it might also include church, camp, or workplace, although the last would be less common in the United States than in some other societies. In sum, stated succinctly, a mesosystem is a system of microsystems.
>
> 3. An exosystem is an extension of the mesosystem embracing other specific social structures, both formal and informal, that do not themselves contain the developing person but impinge upon or encompass the immediate settings in which that person is found, and thereby influence, delimit, or even determine what goes on there. These structures include the major institutions of the society, both deliberately structured and spontaneously evolving, as they operate at a concrete local level. They encompass, among other structures, the world of work, the neighborhood, the mass media, agencies of government (local, state and national), the distribution of goods and services, communication and transportation facilities, and informal social networks.

> 4. A macrosystem refers to the overarching institutional patterns of the culture or subculture, such as the economic, social, educational, legal, and political systems, of which micro-, meso-, and exosystems are the concrete manifestations. Macrosystems are conceived and examined not only in structural terms but as carriers of information and ideology that, both explicitly and implicitly, endow meaning and motivation to particular agencies, social networks, roles, activities, and their interrelations. What place or priority children and those responsible for their care have in such macrosystems is of special importance in determining how a child and his or her caretakers are treated and interact with each other in different types of settings. (Bronfenbrenner, 1977, pp. 514-515)

Willems (1973) argues that even though behavioral scientists often talk about the importance of systems concepts, complex dependencies, reciprocity, and time-related cycles, "they almost never show up in the actual reports of our research. By and large, we continue to study the phenomena of behavioral development as if they were simple, single-file, and relatively stable." (p. 202)

Willems lists a number of characteristics of his view of the ecological perspective:

> First, the ecological perspective on behavior places a great deal of emphasis upon the mutual and interdependent relations among the organism, its behavior, and its environment . . .
>
> Second, this perspective is largely naturalistic in its methodological orientation. I say "largely" because it is not defined by any particular technique and because I am pointing to an emphasis rather than a necessary condition . . .
>
> Third, the ecological psychologist assumes and acts on the assumption that the phenomena of psychology participate in a much larger network of phenomena, descriptions, and disciplines. Thus, ecology tends to be highly eclectic and the ecologist tends to borrow and lend concepts, methods, and hypotheses freely, with little sense of preciousness about boundaries between disciplines.
>
> Fourth, the ecological perspective tends, generally, to place more emphasis upon molar phenomena than upon molecular ones. Closely related is a relative emphasis upon environmental, behavioral, and organismic holism and simultaneous, complex relationships . . .

> Fifth, this perspective concerns itself with the distribution of phenomena in nature; upon the range, intensity, and frequency of behavior in the everyday, investigator-free environment . . .
>
> Sixth, the ecological perspective concerns itself with one of the great voids in modern American psychology--the problem of taxonomy. What are the units of environment and behavior? Into what types of classification do situations, behaviors, and environments fall?
>
> Seventh, the ecological perspective devotes a great deal of effort to the question of habitability; that is to the issue of what kinds of environments are fit for human beings to inhabit . . .
>
> Eighth, and closely related to what I have already suggested, the ecologist is much more willing than many of his peers to favor working from the complex to the simple as his strategy of choice and to accept complicated, intact phenomena as his arena. (pp. 207-208)

The Preventive Perspective

At previous meetings, Panel members have stressed the need for research on the prevention rather than the rehabilitation of developmental problems and disorders. The central premise is straightforward--that it is preferable to prevent a problem from developing than to try to correct it or treat it after it has developed. Not only is it better from a humanistic standpoint, but in many cases the preventive measures may be more cost-effective than the corresponding rehabilitative services. For instance, to the extent that preschool education programs and home visitor programs focusing on parent-infant interaction contribute to the intellectual and social growth of children, they reduce the need for later, long-term special education efforts. The challenge is twofold--to identify factors that contribute to the incidence of physical, mental and social problems, and to develop effective methods for delivering to those who need it the appropriate aid in heading off those problems, whether that aid be in the form of information, health care, day care, etc.

In order to develop a strategy for preventing problems, however, we need to understand not only the antecedents of the problems themselves, but also the antecedents of wellness. That is, what factors contribute to the absence of these problems? This brings us to the strength-oriented perspective.

The Strength-Oriented Perspective

Investigating problems in child development and specific deficiencies that constitute or contribute to those problems is certainly an appropriate research strategy, and one that is frequently used. Indeed, it is often difficult not to focus on problems and disorders, and sometimes easier to define wellness as the absence of particular problems than as the presence of particular strengths. At the same time, an exclusive focus on deficiencies unnecessarily limits the scope of theory and research on the development of children. We need to understand not only why certain children have developmental problems, but also why other children acquire various forms of competence, even under adverse circumstances. What contributes to the development of wellness (physical, mental, social, educational, etc.)? Thus one aspect of this perspective is simply to extend research inquiries to the development of competence across a broad spectrum of developmental and environmental conditions.

A strength-oriented perspective can influence research in another way. It can direct our attention to the features of a developmental course or outcome that are adaptive to a particular ecological setting.

> Rather than assume that all children in the world should be moving toward the same "best" goal, it is useful to consider the possibility that each child is trying to adapt to the demands of his specific psychological environment. The goal of his development will depend upon the place in which he lives. An Eskimo child, who lives with many other people in a small igloo for nine months of the year, must learn to inhibit all displays of temper and agression if he is to remain on good terms with his family and friends. Therefore, the ideally mature adult in this setting should be self-controlled and rarely aggressive. By contrast, an urban American child must

> learn to defend himself against attack from peers and the ideally mature adult should be capable of reacting with appropriate anger and verbal aggression when attacked or threatened. Neither rigid control nor free expression of anger should be regarded as the more mature trait for all people, no matter where they live. Each is appropriate to the setting in which the child and adult must function. (Mussen, Conger and Kagan, 1974, p. 36)

By treating a child's developmental progress as deficient in some preconceived sense, a researcher may focus on factors which are irrelevant to that child's circumstances--i.e., the researcher may end up asking the wrong questions and looking at the wrong variables. On the other hand, by trying to determine the extent to which and the ways in which the child has adapted to his or her own ecological setting, the researcher may discover a whole new set of variables that deserve attention, and so progress more quickly toward an understanding of the dynamics of that developmental issue.

Another variation of the strength-oriented perspective is to look for multiple developmental pathways to the same outcome, even within a single ecological setting. That is, children may have strengths in different areas, yet be able to draw on these different strengths in such a way that they reach equivalent levels of functioning in a particular domain. Thus, the best way to enhance development may not necessarily be to concentrate on ameliorating weaknesses, but may be to identify and build on stronger, alternative modes of functioning.

The Developmental/Ecological Model

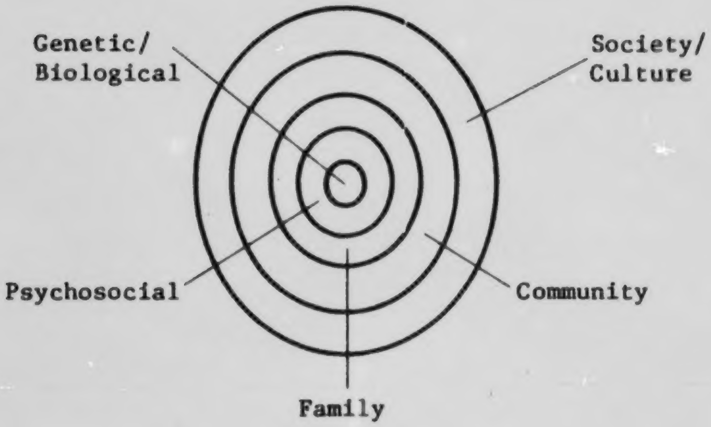
In their earlier work on ecological approaches to research on children, Panel members had found it useful to categorize research issues within a matrix, as explained in the earlier section of this chapter. Panel members wanted to continue to use an organizational device which would facilitate communication between agencies, but opted for a conceptual model which was more dynamic than a matrix, and which emphasized the continuity over time of the child's development and his/her interactions with the ecology.

The model could be used to chart agency activities and plans, in order to indicate which agencies converge in which areas, to categorize current research findings and knowledge, to categorize current policy concerns and finally, to generate new research questions.

It was suggested that the major factors in the child's ecology could be more effectively portrayed as a set of concentric circles, rather than as linear cells of a matrix. Specifically, the diagram shown in Figure 3 was suggested.

Figure 3

Major Systems in Child's Ecology

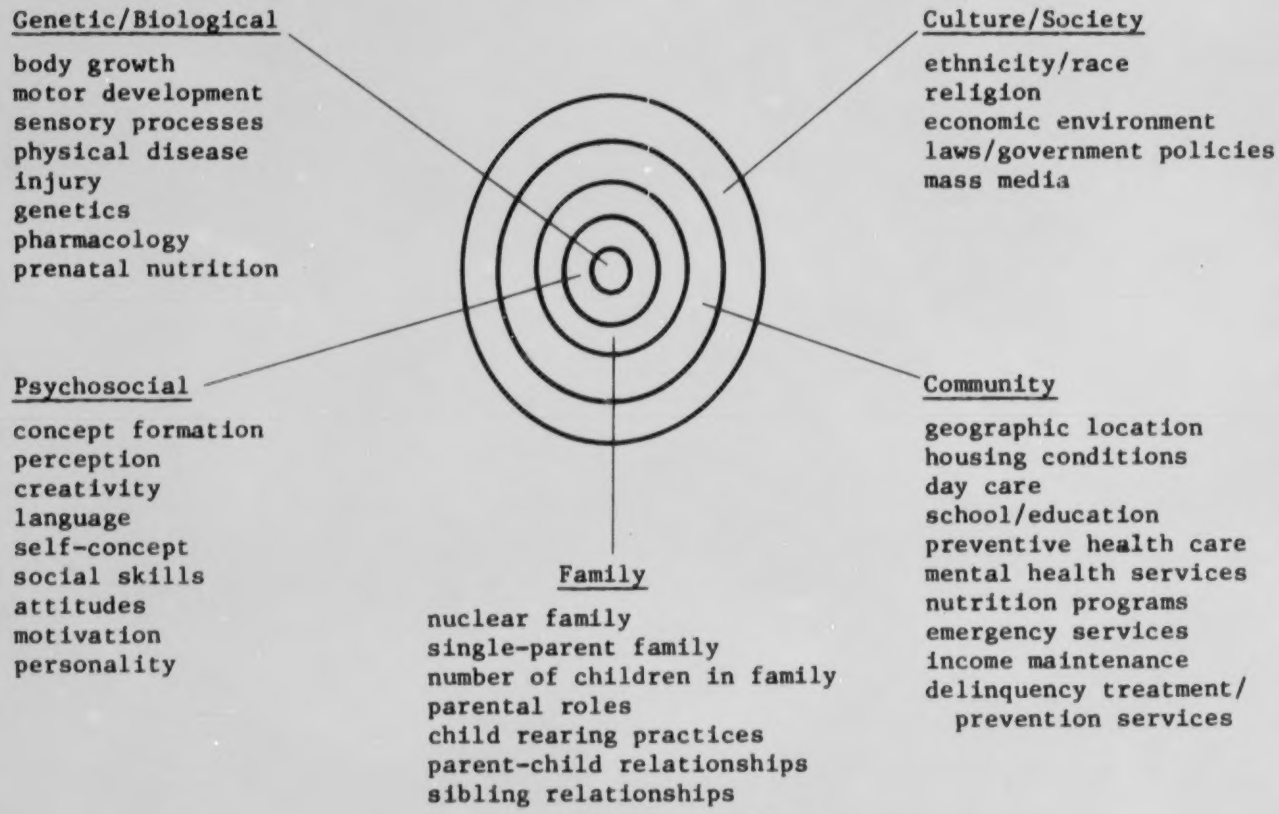


The two innermost circles represent the basic processes of development, separated for analytic purposes into the genetic/biological processes and the psychosocial processes. These are embedded within the family, then the community, and finally the surrounding society and culture. Note that even though boundaries are used in this diagram to separate the different systems of the child's ecology, the circles are embedded within each other to indicate that the systems are interdependent. A critical aspect of this model is the recognition that there are complex, multidirectional and pervasive interrelations between the systems represented by the various layers. For example, the child's experiences in his/her family will be shaped by the child's physical/social/cognitive make-up, as well as by the structure of the family and the surrounding society and culture.

The diagram in Figure 4 indicates how specific descriptors in the Interagency Research Information System might relate to these various levels of the child's ecology. The descriptors shown here constitute only a portion of those available from the IRIS classification scheme. (In some cases these descriptors may be relevant to levels other than those to which they are linked in this diagram.)

Figure 4

Major Systems: Relevant IRIS Descriptors



Genetic/Biological

body growth
motor development
sensory processes
physical disease
injury
genetics
pharmacology
prenatal nutrition

Culture/Society

ethnicity/race
religion
economic environment
laws/government policies
mass media

Psychosocial

concept formation
perception
creativity
language
self-concept
social skills
attitudes
motivation
personality

Community

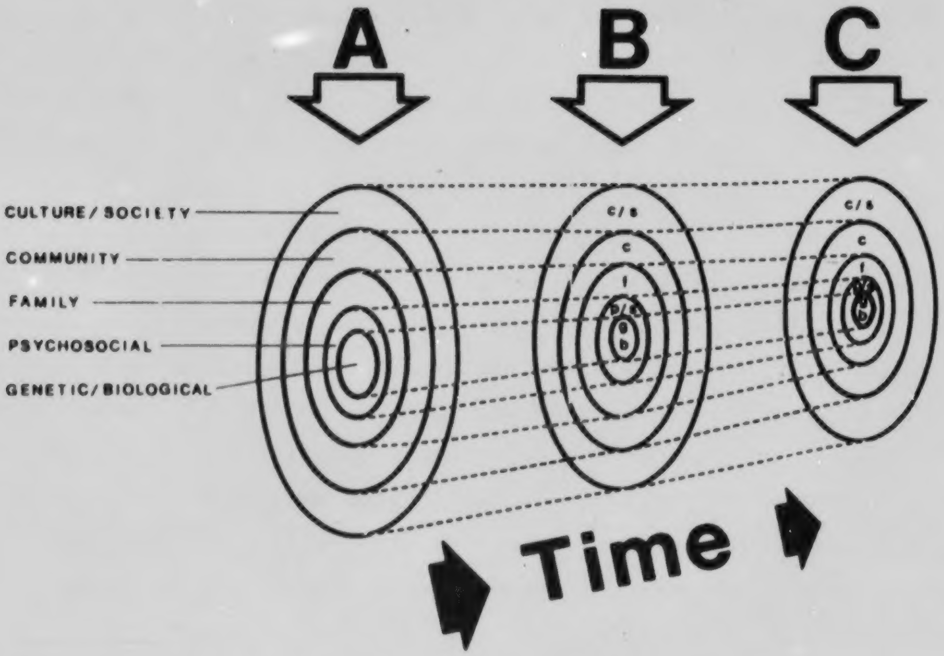
geographic location
housing conditions
day care
school/education
preventive health care
mental health services
nutrition programs
emergency services
income maintenance
delinquency treatment/
prevention services

Family

nuclear family
single-parent family
number of children in family
parental roles
child rearing practices
parent-child relationships
sibling relationships

Figure 5 shows the concentric circles extended into a third dimension to represent the development of the child and his/her ecology across time.

Figure 5
The Developmental/Ecological Model


A
B
C
CULTURE/SOCIETY
COMMUNITY
FAMILY
PSYCHOSOCIAL
GENETIC/BIOLOGICAL
c/s
c
f
p/s
b
Time

The model indicates development occurring from left to right, and can be applied to a microanalysis of developmental change (e.g., Point A = birth, Point B = 1 month of age, and Point C = 3 months of age) as well as a macroanalysis of change (e.g., Point A = onset of infancy, Point B = onset of adolescence, and Point C = onset of old age). Three points in time are shown here only as examples. The model represents a continuum of development and any number of points in time or periods of time can be conceptualized.

This model thus emphasizes the developmental continuum as well as the major systems in the child's ecology, and encourages the researcher to frame research questions in terms of more than one developmental factor or sector of the child's ecology, and in terms of changes across time in the interrelationships between these aspects of the child's ecology.

The preventive and strength-oriented perspectives, while not explicitly identified in this model, can be easily applied to research issues developed within the context of this model. The time element is basic to the preventive perspective. In order to prevent problems which occur at some stage of the child's development, investigators must search for contributing factors at earlier points in the developmental course. In addition, this search cannot be confined to individual aspects of the child's development and ecology, but will have to focus on interrelationships between factors. For instance, the association between low birth weight and later developmental disabilities appears to be stronger for low-income, black families than for high-income white families. Intervention at different points in time may have to be geared to different levels of the child's ecology and accordingly involve different preventive strategies. For instance, a particular mental disorder may involve a genetic/biological proclivity which in turn is exacerbated by particular family and community situations. At different points in time, different combinations of intervention modes (e.g., nutritional/pharmacological treatment, parent education, child therapy, family therapy, income assistance) may be most effective in heading off the problem. For any one problem, then, the task is to identify and define the risks in each of the various levels of the child's ecology, and then track over time the results of interventions designed to minimize or eliminate those risks.

Similarly, the strength-oriented perspective is congruent with this conceptualization of the child's ecology over time. The model encourages the researcher to consider the antecedents of wellness (e.g., in physical and psychosocial development, social behavior, educational achievement). Furthermore, it emphasizes the adaptation of the individual to his/her physical and social environment (and vice versa). A "deficiency" measured at one point in time may be more appropriately conceptualized (and thus more effectively investigated and more quickly understood) as an adaptive response to earlier conditions. Finally the model calls attention to the possibility of multiple developmental pathways (e.g., development through different configurations of ecological factors) to the same outcome at a later point in time.

The Multidimensional Approach to Research Problems

It is apparent that many disciplines and methodologies are appropriate for investigating factors across the levels represented in the model. Economic and anthropological approaches may be best suited to the society/culture level, sociological approaches to the family and community levels, and psychological and biological approaches to the innermost levels. This point should not be overstated, however, since there is considerable overlap between these disciplines, and since the focus of research is often on interactions between levels of the child's ecology, and not just on factors within a particular level. A point which cannot be overstated is that many different kinds of methodologies, designs and data will be required in order to understand the complex relationships between the various developmental and ecological domains illustrated in the model. Panel members argued that research on children is now dominated by a small number of disciplines, approaches and methods. They pointed out that even some data relating to the child's ecology which are available (e.g., Census data) are not being used to any significant extent by child development researchers.

Specific Research Areas

Figure 6 illustrates the application of the developmental/ecological model to specific research areas. It is apparent that in any broad area, such as nutrition, research issues will range from the biological to the cultural, and that these issues will be interrelated in different ways across time.

Figure 6a
Application of the Ecological Model
to Specific Research Issues

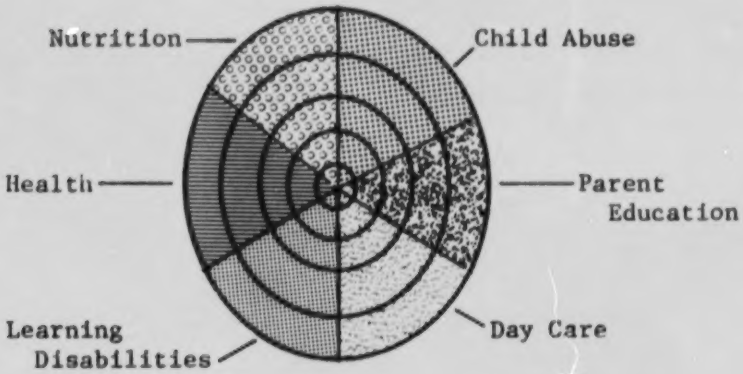
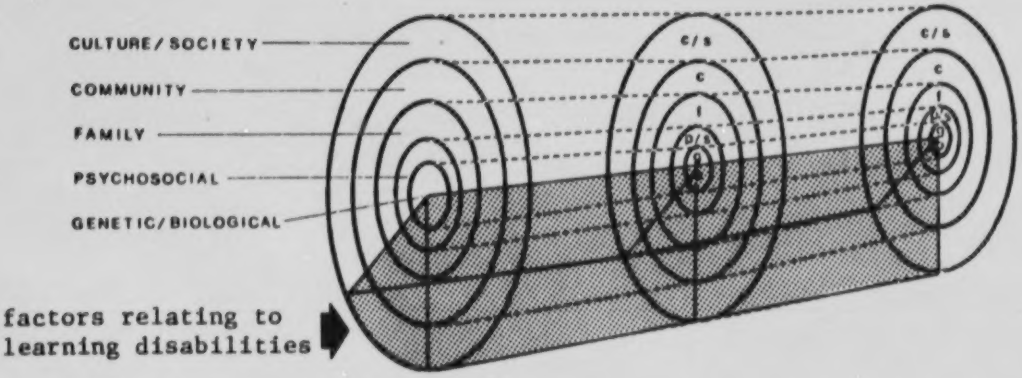

Nutrition
Child Abuse
Health
Parent Education
Learning Disabilities
Day Care

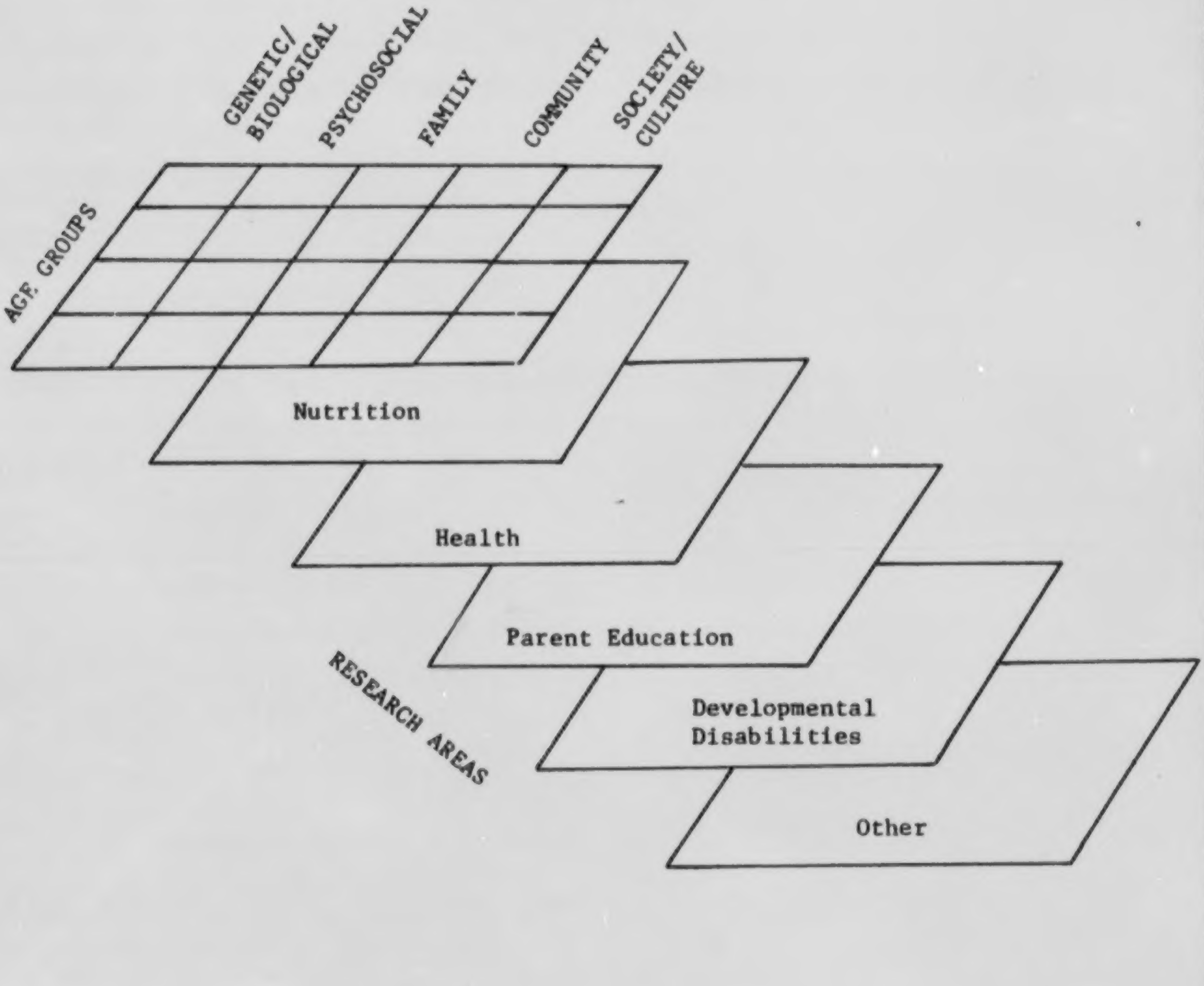
Figure 6b
Ecological Factors Relating to
Learning Disabilities across Time


CULTURE/SOCIETY
COMMUNITY
FAMILY
PSYCHOSOCIAL
GENETIC/BIOLOGICAL
c/s
c
f
p/s
c/s
c
f
factors relating to learning disabilities

Matrix of Developmental and Ecological Issues

Panel members suggested that the developmental/ecological model was not as convenient as a matrix for classifying research issues. Therefore, a matrix was suggested as a supplement to the circular model, incorporating the same major dimensions, but in a different format. Age groups or stages of development are shown on one side of the matrix, with the major aspects of the child's ecology across the top. This matrix can be applied to different areas of research as shown in Figure 7.

Figure 7
Application of Matrix to Specific Research Areas


GENETIC/ BIOLOGICAL
PSYCHOSOCIAL
FAMILY
COMMUNITY
SOCIETY/ CULTURE
AGE GROUPS
Nutrition
Health
Parent Education
Developmental Disabilities
Other
RESEARCH AREAS

A Panel Conference on the Theme

The Panel will continue to use the developmental/ecological model in categorizing and generating research issues and questions. In addition, the Panel will sponsor a conference on June 5th and 6th, 1978, to address its contention that a broader approach to child development is necessary, and that a greater diversity of disciplines, models, issues, methods and data must be embraced by researchers in the years to come. The conference, "Child Development within the Family--Evolving New Research Approaches," is intended to provide insight into how we can evolve new research approaches to child development and aid the Panel in developing new perspectives for research planning and coordination. Three workgroups are planned, dividing the general task of the conference into the following areas: (1) emerging issues and priorities in research on children and families; (2) sources of information on children and families, and present and future needs for such information; and (3) current methods and approaches in child development research. The general sessions and workgroups will be attended by invited research and policy experts from around the country, and researchers, administrators and policy-makers from the Federal agencies.

CHAPTER III

AN ANALYSIS OF THE OVERALL FY '77 FEDERAL EFFORT IN EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

This chapter provides a picture of all of the early childhood research supported in FY '77 by the Federal agencies represented on the Interagency Panel on Early Childhood Research and Development. For the Panel's purposes, early childhood is defined as prenatal through nine years of age. The data described in this chapter are derived from the Interagency Panels' Information System, which contains information about 4,998 projects active in FY '77, accounting for $474,028,345 in funding. Not all of these projects pertain to the early childhood age range, however, since the information system, which is shared by the Early Childhood Panel and the Adolescence Panel, covers research spanning the age range from prenatal to late adolescence. Children nine years or younger are involved in 3,664 projects, funded for $367,680,138.[3] Of course, many of these projects also involve children older than nine years; only 1,558 projects focus exclusively on children nine years or younger. In the remaining portion of this report, the more inclusive method of figuring early childhood activity will be used. Thus, 3,664 and $367.7 million are used as the denominators in computing the percentages shown in the tables and figures in this chapter.

The Agencies

The FY '77 Federal research (prenatal through adolescence) included in the Panels' Information System is supported by 29 departments, agencies and divisions of agencies, as listed in Table 1. This table indicates the number of projects and amount of funding for each department or agency (including nine subdivisions of the Office of Education). The amount of activity ranges from 3 projects ($900) for ACTION to 2,496 projects ($276,557,606) for OE. It is not particularly helpful to talk of an average project cost across all agencies, since projects vary considerably in the funds allocated, both within and across agencies. Some FY '77 projects received no funding, or only a few thousand dollars, and others received more than a million dollars. Research projects may account for more funds in some agencies or areas than in others. For instance, the 534 FY '77 projects reported for NIMH account for $20.2 million, whereas the smaller number of projects reported for NIE (427) account for more than twice as much funding ($46.0 million). It is important, therefore, to take both data columns into consideration when assessing levels of activity.

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[3] USDA funded 123 of the 3,664 FY '77 early childhood projects. Funding figures for these USDA projects were not available when this report was prepared, however, and therefore are not reflected in the $367.7 million shown as the total FY '77 funds.

Table 2 presents a breakdown by agencies of FY '77 research on children. Exactly half of the FY '77 early childhood projects are supported by OE. Other agencies with substantial proportions of the activity are NIMH, NICHD, NIE, ACYF, NINCDS, and USDA.

Type of Funding

The 3,664 FY '77 projects are funded through various arrangements, as can be seen in Table 3, with the majority supported through grants (80% of the total number; 73% of the total funds). The majority of the grants were awarded competitively. Fifteen percent of the FY '77 projects are administered through contracts, although they account for a little more than a quarter of all FY '77 early childhood funds. Again, competitive awards outnumber non-competitive ones. Finally, there are 102 intramural projects and 95 projects classified as agreements.

Table 1

FY '77 Federal Research on Children and Adolescents, by Agency

Agency	Projects	Funding[a]
Total	4,998	474.0
Office of the Assistant Secretary for Planning and Evaluation (ASPE)	19	.2
Office of Human Development Services (OHDS)	297	32.4
Administration for Children, Youth and Families(ACYF)	268	31.1
Administration for Public Service (APS)	18	1.1
Rehabilitation Service Administration (RSA)	11	.2
Bureau of Community Health Services (BCHS)	63	5.2
Health Care Financing Administration (HCFA)	17	1.5
National Institute of Child Health and Human Development (NICHD)	525	34.0
National Institute of Mental Health (NIMH)	534	20.2
National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)	116	12.4
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	43	3.1
National Institute on Drug Abuse (NIDA)	145	11.0
National Center for Educational Statistics (NCES)	40	9.0
National Institute of Education (NIE)	427	46.0
Office of Education (OE)	2,496	276.6
Bureau of Education for the Handicapped (BEH)	503	47.1
Bureau of Elementary and Secondary Education (BESE)	244	62.3
Bureau of Occupational and Adult Education (BOAE)	359	16.6
Division of International Education (DIE)	72	1.4
Office of Bilingual Education (Title VII)	567	91.3
Office of Career Education (OCE)	149	8.5
Office of Indian Education (OIE)	210	16.4
Office of Planning, Budgeting and Evaluation (OPBE)	65	14.5
Right to Read	327	18.4
ACTION	3	.0009
Department of Agriculture (USDA)	178	( )[b]
Department of Labor (DOL)	26	14.8
Department of Justice, Law Enforcement Assistance Administration (LEAA)	25	6.1
National Science Foundation (NSF)	44	1.6

[a] In millions of dollars.

[b] USDA funding figures were not available at the time this report was prepared.

Table 2

FY '77 Federal Early Childhood Research, by Agency

Agency	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total	3,664	(100.0)	367.7	(100.0)
Office of the Assistant Secretary for Planning and Evaluation (ASPE)	16	(.4)	.2	(.07)
Office of Human Development Services (OHDS)	268	(7.3)	30.4	(8.3)
Administration for Children, Youth and Families (ACYF)	246	(6.7)	29.2	(7.9)
Administration for Public Service (APS)	16	(.4)	1.0	(.3)
Rehabilitation Service Administration (RSA)	6	(.2)	.1	(.04)
Bureau of Community Health Services (BCHS)	61	(1.7)	5.0	(1.4)
Health Care Financing Administration (HCFA)	16	(.4)	1.4	(.4)
National Institute of Child Health and Human Development (NICHD)	427	(11.7)	27.2	(7.4)
National Institute of Mental Health (NIMH)	349	(9.5)	13.2	(3.6)
National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)	106	(2.9)	11.7	(3.2)
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	15	(.4)	1.9	(.5)
National Institute on Drug Abuse (NIDA)	45	(1.2)	3.6	(1.0)
National Center for Educational Statistics (NCES)	17	(.5)	5.4	(1.5)
National Institute of Education (NIE)	338	(9.2)	39.8	(10.8)
Office of Education (OE)	1,832	(50.0)	225.1	(61.2)
Bureau of Education for the Handicapped (BEH)	438	(12.0)	42.3	(11.5)
Bureau of Elementary and Secondary Education (BESE)	212	(5.8)	61.9	(16.8)
Bureau of Occupational and Adult Education (BOAE)	138	(3.8)	4.3	(1.2)
Division of International Education (DIE)	44	(1.2)	.7	(.2)
Office of Bilingual Education (Title VII)	464	(12.7)	75.0	(20.4)
Office of Career Education (OCE)	115	(3.1)	6.6	(1.8)
Office of Indian Education (OIE)	134	(3.7)	11.0	(3.0)
Office of Planning, Budgeting and Evaluation (OPBE)	40	(1.1)	9.6	(2.6)
Right to Read	247	(6.7)	13.6	(3.7)
Department of Agriculture (USDA)	123	(3.4)	( )[d]	--
Department of Labor (DOL)	4	(.1)	.09	(.03)
Department of Justice, Law Enforcement Assistance Administration (LEAA)	8	(.2)	1.1	(.3)
National Science Foundation (NSF)	39	(1.1)	1.4	(.4)

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[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

[d] USDA funding figures were not available at the time this report was prepared.

Table 3

Distribution of FY '77 Early Childhood Projects
by Type of Funding Arrangement

Type of Funding Arrangement	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Grant	2,919	(79.7)	266.5	(72.5)
Competitive	1,915	(52.3)	160.3	(43.6)
Non-Competitive	701	(19.1)	88.5	(24.1)
Contract	548	(15.0)	99.8	(27.1)
Competitive	272	(7.4)	61.2	(16.6)
Non-Competitive	162	(4.4)	29.6	(8.0)
Intramural	102	(2.8)	1.1	(.3)
Agreement (e.g., procurement orders)	95	(2.6)	.3	(.1)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Interpreting the Data

A few words of explanation regarding the Panel's system of classifying and coding research projects are necessary as a preface to the data. The content or focus of each project is classified in two ways. First. the major focus of the project is determined. Even if a project investigates several factors (e.g., cognitive development, socioemotional development, and day care), only the factor judged by the coder to be most central to the purpose of the study is designated as the primary focus. For projects with a significant focus on more than one factor, a single secondary focus is selected in a similar fashion. (In cases where no secondary focus is apparent, however, none is coded.) The coder chooses from a set of seven general categories in designating the primary and secondary foci: (1) the developmental processes; (2) the family; (3) the broader social environment; (4) health/welfare services; (5) educational services; (6) juvenile justice services; and (7) research methodology.

After the primary and secondary foci have been determined, the coder classifies the content of the project again, but according to a much more extensive set of descriptors. numbering in the hundreds. This second set of descriptors contains the same ones used to designate primary or secondary focus, but also a large number of subcategories which fall under these general descriptors. This second set of descriptors is used to classify all aspects of the research project, regardless of whether they are major or minor factors, and there is no limit on the number of descriptors that can be used. Thus, in most of the tables that follow, the categories are not mutually exclusive. That is, a project may pertain to two (or many more) categories, such as physical development and cognitive development, and accordingly will be reflected in the figures presented for each of these categories. In such tables, the individual percentages sum to more than 100 percent. In a few tables, such as those reporting data on primary and secondary foci, the categories are mutually exclusive and sum to 100 percent.

Major Areas of Research

With regard to the content areas of the FY '77 research projects, Table 4 is the single most informative table in this chapter. The table indicates the number and percentage of projects in which each of 21 major areas is the primary focus, the secondary focus, and the minor focus. Recall that according to the IRIS classification system, the primary focus is the most important focus, and the secondary focus is the second most important focus. In contrast, an area is classified as a minor focus of a project if it is not the primary or secondary focus, but is included within the general focus of the project. Thus, the top row of figures in the table indicates that 2,419 FY '77 early childhood projects focus to some degree on the developmental processes. In 784 of those projects, the developmental process is the primary focus, in 663 projects it is the second most important focus, and in 1,065 projects it is not one of the two most important areas being studied.

Three of the general categories (developmental processes, health and welfare services, and educational services) are broken down into subcategories. It can be seen that the figures shown for the subcategories do not sum to the figures shown for the general categories. The first and second sets of columns differ in this regard from the third and fourth sets of columns. In the case of the primary focus and secondary focus columns, the subcategory figures sum to less than the general category figures. While the subcategories are mutually exclusive, the superordinate category figures include the sum of the figures shown for the subcategories plus a number of projects which were classified at a general level only. In the case of the minor focus and total columns, the subcategories sum to more than the figures shown for the superordinate categories. The reason for this is that in contrast to the first two sets of columns the categories are not mutually exclusive; a project may be counted in more than one category or subcategory.

The area included in the largest proportion of FY '77 projects is the developmental processes (66.0%). Educational services are focused on by almost as many projects (63.2%). A different pattern is apparent, however, if we shift from the total columns to the primary focus columns. In

Table 4

Distribution of FY ' 77 Early Childhood Projects, by Research Category

Category	As Primary Focus of Study		As Secondary Focus of Study		As Minor Focus of Study		Total	
	No.	%[a]	No.	%[a]	No.	%[a]	No.	%[a]
The Developmental Processes	784	(21.4)	663	(18.1)	1,065	(29.1)	2,419	(66.0)
Physical Development	363	(9.9)	134	(3.7)	446	(12.2)	943	(25.7)
Cognitive Development	257	(7.0)	214	(5.8)	1,033	(28.2)	1,504	(41.0)
Socioemotional Development	111	(3.0)	135	(3.7)	1,003	(27.4)	1,249	(34.1)
The Family	105	(2.9)	197	(5.4)	388	(10.6)	690	(18.8)
The Broader Social Environment	70	(1.9)	169	(4.6)	479	(13.1)	718	(19.6)
Health and Welfare Services	428	(11.7)	222	(6.1)	194	(5.3)	836	(22.8)
Day Care	34	(.9)	2	(.1)	33	(.9)	69	(1.9)
Health Care	215	(5.9)	190	(5.2)	231	(6.4)	636	(17.4)
Welfare	115	(3.1)	5	(.1)	107	(2.9)	227	(6.2)
Educational Services	2,152	(58.7)	109	(3.0)	96	(2.6)	2,314	(63.2)
Special Education	393	(10.7)	13	(.4)	54	(1.5)	460	(12.6)
Early Childhood Education	106	(2.9)	10	(.3)	266	(7.3)	382	(10.4)
Elementary Education	623	(17.0)	15	(.4)	712	(19.5)	1,350	(36.8)
Secondary Education	21	(.6)	9	(.2)	579	(15.8)	609	(16.6)
Post-Secondary Education	3	(.1)	1	(.0)	53	(1.4)	57	(1.6)
Alternative Education	8	(.2)	-	-	49	(1.3)	57	(1.6)
Parent Education	12	(.3)	8	(.2)	166	(4.5)	186	(5.1)
Educational Management	343	(9.4)	26	(.7)	217	(5.9)	586	(16.0)
Juvenile Justice Services	16	(.4)	2	(.1)	18	(.5)	36	(1.0)
Study of Research Methods	109	(3.0)	97	(2.6)	275	(7.5)	481	(13.1)

Note. As primary or secondary focus, categories are mutually exclusive, with the exception that a category subsumes any other categories indented immediately below it. Categories are not mutually exclusive when they refer to the minor focus or total columns.

[a] Percentage of total number of early childhood projects (3,664).

almost all of the projects which focus on education, education is the most important area of concern. In only a third of the projects which focus on the developmental processes, however, is the primary focus on the developmental processes. Furthermore, in almost half of the 2,419 projects pertaining to the developmental processes, the developmental processes are neither the first nor second most important areas of concern. In other words, many projects which focus primarily on the family, the broader social and physical environment, and health, education, and welfare services, also examine or measure some aspect of the child's physical, cognitive, or socioemotional development.

Which of the subcategories of the developmental process is most frequently studied? Physical development is the primary focus of 363 projects, while cognitive development is the primary focus of 257 projects, and socioemotional development the primary focus of only 111 projects. Yet cognitive and socioemotional development are much more often included as the minor focus (1,033 projects and 1,003 projects, respectively). That is, cognitive and socioemotional measures are much more likely to be included in early childhood projects than are physical measures, even though cognitive and socioemotional processes are the major areas of concern less frequently than are physical processes.

The family is a factor in 18.8% of the FY '77 projects, and in almost half of these 690 projects it is either the primary or secondary focus. The broader social and physical environment is studied in a similar proportion of the projects (19.6%), although it is more often a minor focus than a major focus.

The bulk of the research on health and welfare services (22.8%) is oriented toward health care (17.4%), although a substantial proportion of projects focuses on welfare (6.2%). Only 69 projects (1.9%) involve day care, and in half of these projects day care is not even a major area of concern.

Not surprisingly, the largest proportion of education studies is oriented toward elementary education (36.8%). Considerable attention is also given to secondary education (16.6%), special education (12.6%), and early childhood education (10.4%).

Kinds of Research

Figure 8 provides information on the different kinds of FY '77 early childhood activity, classified as: basic research, applied research, evaluation research, policy research, demonstrations, research support and utilization, and social data gathering and analyses (social accounting).

The Interagency Research Information System defines these kinds of activities as follows:

Basic research refers to research directed primarily toward the increase of knowledge, the improvement of understanding, the provision of background information, and the discovery of basic relationships. It is not necessarily applicable to solutions of immediate problems and may include theory building.

Applied research refers to research in which results are intended to be more directly applicable to immediate problems than basic research. It may be derived from basic research or theory or may be empirical. It may be aimed at showing how existing knowledge can be used in new and useful ways. Included within this category are the subcategories of development (the construction of tests, systems, materials, methods, media, equipment, facilities, prototypes, and models) and demonstration and/or replication (activities designed specifically to test the feasibility or effectiveness of the method of operation or applicability of a research or program model).

Evaluation research refers to research designed to determine the over-all effectiveness of a broad program, projects, models, strategies, materials, methods and costs.

Policy research refers to studies of needs, goals, priorities, and guidelines, and often includes state-of-the-art papers and library research.

Demonstrations refer to projects which demonstrate the use of a model or method as a means of disseminating a previously developed and tested model. These projects must have evaluation components.

Research support and utilization activities refer to projects funded with research dollars that do not conduct basic or applied research, but support the planning or implementation or dissemination of research related

Figure 8a
Percent of Total Number of Early Childhood Research Projects by Kinds of Research, FY'77*

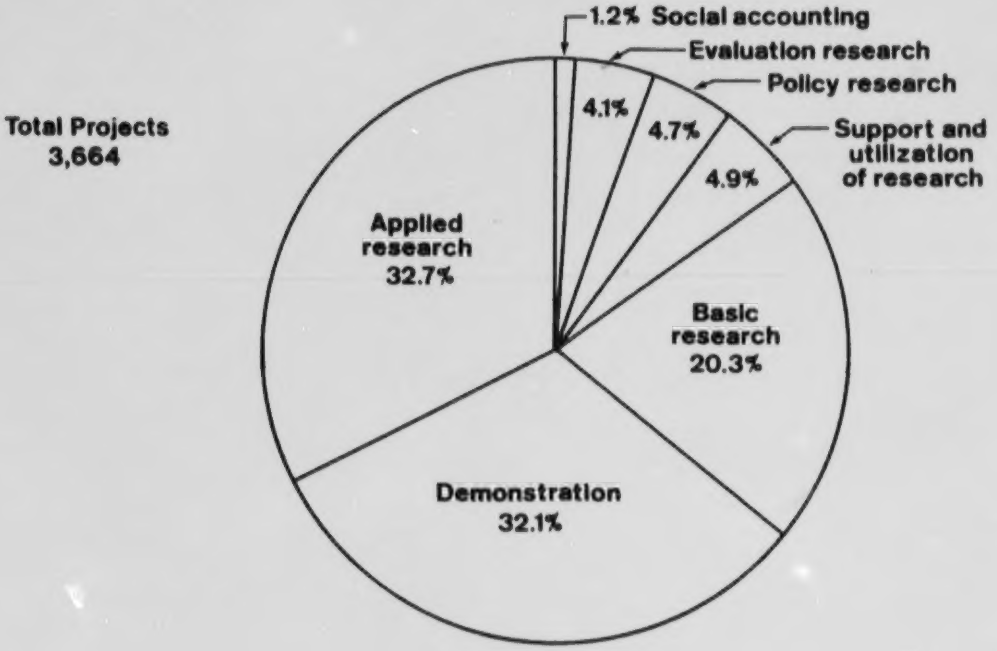
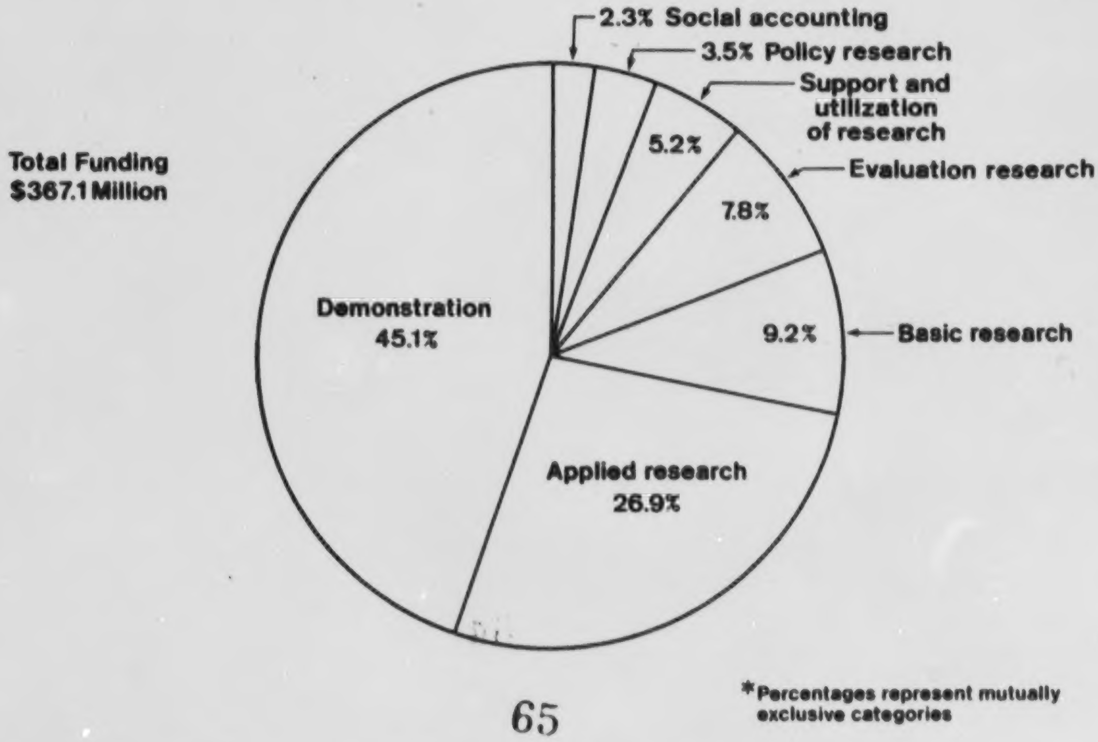


Figure 8b
Percent of Total Early Childhood Research Funding by Kinds of Research, FY'77*



*Percentages represent mutually exclusive categories to children, such as conferences, publications, and the installation of proven models.

Social data gathering and analysis refers to projects which accumulate and analyze data for information resources.

Figure 8a shows that almost a third of all FY '77 early childhood projects are classified as applied research (32.7%), and another third as demonstrations (32.1%). Basic research accounts for 20.3% of the projects, and the remaining projects involve support and utilization of research (4.9%), policy research (4.7%), evaluation research (4.1%), and social accounting (1.2%).

The relatively high cost of demonstrations and applied research projects is apparent in Figure 8b. Demonstrations account for 45.1% of all FY '77 early childhood funds, while applied research projects account for 26.9% of the funds. In contrast, basic research, which represents one-fifth of the projects receives less than one-tenth of the funds.

Table 5 presents a breakdown of these seven kinds of research into general content areas (the data refer only to the primary focus of the projects). Most of the basic research focuses on physical, cognitive, and socioemotional development, the family, and the broader social and physical environment. On the other hand, the bulk of the applied research focuses on education and health services, with some activity apparent in the areas of physical development, research methods, welfare, and cognitive development. Most of the evaluations concern educational and health programs. Almost one-third of all FY '77 early childhood projects are educational demonstrations; only a small number of demonstrations pertain to day care, welfare, and health services. Similarly, most of the policy, social accounting, and support and utilization activities relate to education.

The Developmental Processes

Tables 6, 7, and 8 present breakdowns of the research on developmental processes into subcategories used in the Interagency Research Information System. In these tables, as in most of the remaining tables in this

Table 5

Distribution of FY '77 Early Childhood Projects, by Primary Focus and Kind of Research

Primary Focus	Kind of Research						
	Basic	Applied	Evaluation	Policy	Social Accounting	Demonstration	Support
Physical Development	272 (7.4%)	86 (2.3%)	--	1 (.0%)	3 (.1%)	--	1 (.0%)
Cognitive Development	210 (5.7%)	41 (1.1%)	--	1 (.0%)	1 (.0%)	--	4 (.1%)
Socioemotional Development	89 (2.4%)	13 (.4%)	--	2 (.1%)	1 (.0%)	--	6 (.2%)
Other General[a] Development	32 (.9%)	15 (.4%)	--	3 (.1%)	--	--	3 (.1%)
The Family	73 (2.0%)	21 (.6%)	2 (.1%)	3 (.1%)	3 (.1%)	--	3 (.1%)
Broader Social/Physical Environment	45 (1.2%)	8 (.2%)	1 (.0%)	10 (.3%)	--	--	6 (.2%)
Day Care	2 (.1%)	5 (.1%)	7 (.2%)	13 (.4%)	1 (.0%)	6 (.2%)	--
Health Services	2 (.1%)	150 (4.1%)	23 (.6%)	7 (.2%)	1 (.0%)	31 (.8%)	1 (.0%)
Welfare	--	59 (1.6%)	10 (.3%)	6 (.2%)	3 (.1%)	35 (1.0%)	2 (.1%)
Other General Services[a]	--	34 (.9%)	6 (.2%)	8 (.2%)	2 (.1%)	9 (.2%)	5 (.1%)
Education	11 (.3%)	680 (18.6%)	93 (2.5%)	113 (3.1%)	25 (.7%)	1095 (29.9%)	135 (3.7%)
Juvenile Justice	--	7 (.2%)	6 (.2%)	3 (.1%)	--	--	--
Research Methods	8 (.2%)	78 (2.1%)	4 (.1%)	3 (.1%)	3 (.1%)	--	13 (.4%)

Note. All categories are mutually exclusive. Percentage of total number of early childhood projects is shown in parentheses.

[a] Included in these categories are projects relating to the developmental process or to health/welfare services, but which could not be coded under a specific developmental process or a specific service, primarily because they were too general.

Table 6

FY '77 Early Childhood Research on Physical Development

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Physical Development	943	(25.7)	66.0	(17.9)
Physical Disease	296	(8.1)	22.4	(6.1)
Pregnancy and Childbirth	254	(6.9)	20.1	(5.5)
Physical Characteristics	231	(6.3)	12.8	(3.5)
Motor Development	221	(6.0)	19.8	(5.4)
Physical Handicaps	211	(5.8)	17.7	(4.8)
Body Growth	175	(4.8)	12.1	(3.3)
Sensory Development	126	(3.4)	9.0	(2.5)
Nutrition	104	(2.8)	5.3	(1.5)
Genetics	97	(2.6)	7.5	(2.0)
Pharmacology	93	(2.5)	8.9	(2.4)
Physical Factors related to Education	49	(1.3)	4.0	(1.1)
Epidemiology	42	(1.1)	5.7	(1.6)
Child Abuse/Neglect	32	(.9)	2.1	(.6)
Drug Abuse	24	(.7)	2.8	(.8)
Alcohol Abuse	10	(.3)	1.1	(.3)
Accidents	9	(.2)	.5	(.1)
Environmental Hazards to Health	5	(.1)	.3	(.1)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 7

FY '77 Early Childhood Research on Cognitive Development

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Cognitive Development	1,504	(41.0)	150.2	(40.8)
Cognitive Achievement	744	(20.3)	90.5	(24.6)
Language Development	656	(17.9)	67.3	(18.3)
Cognitive Factors related to Education	308	(8.4)	39.8	(10.8)
Perception	268	(7.3)	20.7	(5.6)
Reading	177	(4.8)	14.0	(3.8)
Learning Processes	170	(4.6)	12.3	(3.4)
Problem Solving	143	(3.9)	9.0	(2.5)
Intellectual Handicaps	123	(3.4)	10.0	(2.7)
Memory	113	(3.1)	6.9	(1.9)
Concept Formation	102	(2.8)	6.1	(1.7)
Attention	81	(2.2)	4.2	(1.2)
Play	41	(1.1)	2.0	(.5)
Creativity	28	(.8)	6.4	(1.7)
Imagery	19	(.5)	1.2	(.3)
Sleep and Dreaming	17	(.5)	2.3	(.6)
Computer Simulation of Thought	11	(.3)	1.6	(.4)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 8

FY '77 Early Childhood Research on Socioemotional Development

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Socioemotional Development	1,249	(34.1)	116.9	(31.8)
Perception of Self	561	(15.3)	64.9	(17.7)
Attitudes	395	(10.8)	41.5	(11.3)
Emotional Development	317	(8.7)	20.3	(5.5)
Interpersonal Relationships	278	(7.6)	20.2	(5.5)
Motivation	193	(5.3)	15.1	(4.1)
Socioemotional Factors Related to Education	171	(4.7)	14.4	(3.9)
Personality	163	(4.4)	11.6	(3.2)
Development of Values/Morals	64	(1.7)	5.4	(1.5)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

chapter, categories refer to the general focus (not just the primary or secondary), and they have been ranked according to number of projects. (Projects would be ranked differently, in some cases, if amount of funding were used.)

In FY '77 research on physical development, physical disease receives the most attention, closely followed by pregnancy and childbirth, and then by physical characteristics, motor development, and physical handicaps. Other areas where substantial activity is evident are body growth, sensory development, nutrition, genetics, and pharmacology.

Table 7 indicates that half of the research on cognitive development involves cognitive achievement. As in previous years, this reflects the heavy use of achievement and aptitude tests as outcome measures in child research and programs, more than it does the direct study of the processes of cognitive achievement. Similarly, the frequent use of tests to measure language performance accounts in part for the large proportion of research on language development.

Other areas of major concern in research on cognitive development are cognitive factors relating to education, perception, reading, learning, problem solving, and intellectual handicaps.

The subcategory of socioemotional development which receives the most attention is perception of the self, which refers to the child's awareness of his own identity. Included in this category are studies of locus of control (the child's perception of control over his own life and actions), cultural and racial identity, and sexual identity.

The Family

Table 9 shows how research projects on the family are distributed according to a number of subcategories. Receiving the most attention are parent-child relationships and parental roles and behavior. Family health, the family/society interface, family structure, and child rearing also figure in relatively large proportions of the research projects. The family's interface with society refers to studies of the impact of

Table 9

FY '77 Early Childhood Research on the Family

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on the Family	690	(18.8)	47.5	(12.9)
Parent-Child Relationships	274	(7.5)	18.0	(4.9)
Parental Roles/Behavior	212	(5.8)	12.1	(3.3)
Family Health	186	(5.1)	14.4	(3.9)
Mental Illness	83	(2.3)	5.3	(1.4)
Physical Illness	55	(1.5)	4.7	(1.3)
Health Practices	37	(1.0)	2.7	(.7)
Family/Society Interface	140	(3.8)	7.3	(2.0)
Family Structure	132	(3.6)	7.6	(2.1)
Child Rearing	107	(2.9)	8.4	(2.3)
Impact of Family on Education	65	(1.8)	4.3	(1.2)
Physical Environment of Home	45	(1.2)	3.1	(.8)
Child Care Arrangements	34	(.9)	1.5	(.4)
Sibling Relationships	24	(.7)	1.6	(.4)
Working Mother	16	(.4)	1.0	(.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

social institutions, social change, and social norms as they produce change in families, and studies of the ways in which families react to, and interact with, their social environment. Only relatively small proportions of research focus on child care arrangements, sibling relationships, and the working mother.

The Broader Social and Physical Environment

The broader social and physical environment is a general category within the Interagency Research Information System which subsumes a variety of miscellaneous factors pertaining to the child's community, society, and culture. Included under this classification are the major ecological factors which interact with the child and the family, with the exception of specific intervention programs and services, which are classified separately.

Table 10 shows that a significant proportion of the FY '77 early childhood projects involves the broader social and physical environment in some way--almost a fifth of all of the projects. Many of these projects focus on aspects of the child's sociocultural environment, primarily his or her ethnic/racial culture and socioeconomic status. The former of these two subcategories refers to studies of the attitudes, norms, and behaviors of the racial/ethnic group to which a child belongs, and studies of the impact of such factors on the child. The latter refers to studies of the income and social status of a child's family and their impact on the child. The impact of religious affiliation on the child is studied in only a small number of projects.

The next most frequently studied general category in this table is social problems, and child abuse figures in more than a third of these projects. Laws and policies affecting children, and the neighborhood environment also receive relatively high levels of attention. Within the neighborhood environment, the category which is the subject of the largest proportion of projects is the geographic location of the neighborhood. Included in this category are the nature of the immediate neighborhood setting, such as rural, urban, suburban, and the larger regions within which the neighborhood is located, such as the county and state.

Table 10

FY '77 Early Childhood Research on the Broader Social and Physical Environment

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Broader Social/Physical Environment	718	(19.6)	60.8	(16.5)
Socio-cultural Environment	340	(9.3)	29.9	(8.1)
Ethnic/Racial Culture	162	(4.4)	11.2	(3.0)
Socioeconomic Status	126	(3.4)	6.6	(1.8)
Religious Affiliations/Practices	15	(.4)	1.3	(.3)
Social Problems	164	(4.5)	14.6	(4.0)
Child Abuse	65	(1.8)	6.7	(1.8)
Laws and Policies Affecting Children	158	(4.3)	14.4	(3.9)
Fiscal Policies	33	(.9)	1.7	(.5)
Regulations and Guidelines	28	(.8)	2.1	(.6)
Legal Rights and Responsibilities of Children	18	(.5)	2.2	(.6)
Neighborhood Environment	148	(4.0)	13.5	(3.7)
Geographic Location	63	(1.7)	8.8	(2.4)
Facilities, Materials and Equipment	22	(.6)	.8	(.2)
Housing Conditions	15	(.4)	.7	(.2)
Ecological Studies	114	(3.1)	11.1	(3.0)
Impact of Education on Child and Society	102	(2.8)	6.8	(1.9)
Economic Environment	51	(1.4)	2.9	(.8)
Mass Media	21	(.6)	1.3	(.4)
Television	15	(.4)	1.2	(.3)
Physical Environment	11	(.3)	.09	(.0)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

About three percent of all FY '77 early childhood projects are classified as ecological studies. This may seem to be a relatively small proportion, given the recent surge of interest in ecological approaches. It should be noted, however, that since ecological approaches are difficult to define and to distinguish from non-ecological approaches, studies are classified as ecological only if the researcher specifically defines it as such, or clearly emphasizes a research approach which places the child in the context of his or her natural physical, social, and cultural environment.

The impact of education on the child and society is a factor in 102 projects. Included in this category are not the effects of specific educational programs, but rather the impact on people of education as a broad social institution.

Examined in only a relatively small number of projects are the economic environment (e.g., economic fluctuations, employment, poverty), the mass media, and the physical environment (e.g., safety hazards, playgrounds).

Intervention Programs and Services

Table 11 presents a breakdown of FY '77 early childhood projects into major programs and services and their components. Education is the recipient of the majority of FY '77 early childhood funds, which is not surprising given that the Office of Education alone supports half of the FY '77 projects.

The distribution of education projects by grade level is about what one might expect. Over half of the education projects involve the grades from kindergarten through third, and more than a third of the projects involve grades fourth through sixth. A much smaller proportion of studies addresses the one or two years of preschool education, and only 85 projects focus on infant education and stimulation programs. The higher levels of education are less frequently studied in early childhood projects than are most of the lower grades. It should be kept in mind, however, that in order to be included in this report, projects must involve children under the age of ten. Therefore, not all of the Federal

Table 11

FY '77 Early Childhood Research on Intervention Programs and Services

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Education	2,314	(63.2)	283.7	(77.2)
Grades K through 3	1,301	(35.5)	179.2	(48.7)
Grades 4 through 6	922	(25.2)	108.1	(29.4)
Grades 7 through 9	584	(15.9)	67.2	(18.3)
Special Education	460	(12.6)	47.6	(12.9)
Grades 10 through 12	458	(12.5)	49.4	(13.4)
Preschool Education	361	(9.9)	31.4	(8.5)
Parent Education	186	(5.1)	16.8	(4.6)
Infant Education	85	(2.3)	5.9	(1.6)
Post-Secondary	57	(1.6)	2.9	(.8)
Alternative	33	(.9)	3.3	(.9)
Health Services	636	(17.4)	87.1	(23.7)
Preventive Health Care	285	(7.8)	59.3	(16.1)
Mental Health Services	277	(7.6)	57.6	(15.7)
Nutrition Programs	215	(5.9)	50.0	(13.6)
Pre- and Post-natal Care	58	(1.6)	4.6	(1.2)
Drug Abuse Treatment	33	(.9)	3.1	(.8)
Alcohol Abuse Treatment and Prevention	18	(.5)	2.1	(.6)
Family Planning	11	(.3)	1.3	(.4)
Welfare Services	227	(6.2)	26.8	(7.3)
Advocacy Services	104	(2.8)	14.3	(3.9)
Child Abuse Prevention/Treatment	82	(2.2)	13.1	(3.6)
Foster Care Services	54	(1.5)	7.4	(2.0)
Emergency Services	30	(.8)	3.7	(1.0)
Adoptive Services	24	(.7)	3.4	(.9)
Employment Services	21	(.6)	1.4	(.4)
Income Maintenance	3	(.1)	.4	(.1)
Day Care	69	(1.9)	4.2	(1.2)
Recreation Programs	30	(.8)	1.5	(.4)
Law Enforcement	20	(.5)	1.5	(.4)
Delinquency Treatment/Prevention	19	(.5)	4.2	(1.1)

Note. Categories are not mutually exclusive; they have been ranked accordin to number of projects.

[a] Percentage of total number of early childhood projects (3,664)

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

research is shown for those grades beyond the fifth grade. The studies displayed for the higher grade levels are only those which include children in the higher grade levels and children under ten years of age. There is considerably more Federal research on secondary and post-secondary education, but it is reported in the Adolescence Annual Report.

As in prior years, special education is the focus of a considerable amount of activity, studied in over ten percent of all early childhood projects. Parent education is an issue in about half that many projects. Modes of alternative education are examined only infrequently.

Research on health services, the next largest cluster of projects, is divided fairly evenly into preventive health care programs (e.g., health maintenance through innoculations, screening, early diagnosis of physical or mental illness), mental health services, and nutrition programs. Receiving much less attention are pre- and post-natal care, drug and alcohol abuse treatment, and family planning.

Most of the projects concerning welfare services focus on advocacy services (programs designed to promote and protect the well-being and rights of children by coordinating existing community services and by acting as an advocate for improved social programs and legislation for the benefit of children), child abuse prevention and treatment, and foster care services.

Many of the education projects examine specific instructional techniques and curricula, and a breakdown of FY '77 research into major kinds of techniques and curricula is presented in Tables 12 and 13. As in previous years. individualized instruction is emphasized more than any other of the techniques shown. Individualized instruction can be applied to any subject matter, of course, and refers to teaching approaches which are tailored to each student's needs, abilities, and problems. Bilingual instruction (instruction in more than one language or in the native language of the students, with English as the second language, but not instruction of English-speaking students in a foreign language) is also a component in a large number of projects. Tutorial instruction, which is similar to individualized instruction in that it involves one child or small groups of children, but is primarily remedial, is involved in a smaller but still substantial number of projects. The remaining techniques shown in Table 12 are all examined in small numbers of projects.

Table 12

FY '77 Early Childhood Research on Education, by Instructional Technique

Instructional Technique	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Instructional Techniques	1,469	(40.1)	216.1	(58.8)
Individualized Instruction	650	(17.7)	88.6	(24.1)
Bilingual Instruction	570	(15.6)	81.7	(22.2)
Tutorial Instruction	164	(4.5)	14.0	(3.8)
Team Teaching	42	(1.1)	5.4	(1.5)
Volunteer Community Service	38	(1.0)	2.9	(.8)
Television Instruction	35	(1.0)	11.8	(3.2)
Open Classroom	34	(.9)	5.0	(1.4)
Cross-age Teaching	29	(.8)	1.5	(.4)
Nongraded Instruction	28	(.8)	3.9	(1.1)
Peer Teaching	24	(.7)	2.6	(.7)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 13

FY '77 Early Childhood Research on Education, by Type of Curriculum

Curriculum	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Curriculum	1,931	(52.7)	257.1	(69.9)
Language Arts	1,134	(30.9)	178.2	(48.5)
Reading	864	(23.6)	122.2	(33.2)
Math	695	(19.0)	140.4	(38.2)
Cultural Awareness	562	(15.3)	79.1	(21.5)
Social Studies	392	(10.7)	65.9	(17.9)
Science	287	(7.8)	47.6	(13.0)
Career Education	210	(5.7)	22.0	(6.0)
Health Education	209	(5.7)	52.1	(14.2)
Fine Arts	166	(4.5)	26.5	(7.2)
Education for Parenthood	116	(3.2)	11.4	(3.1)
Vocational Education	113	(3.1)	28.2	(7.7)
Physical Education	98	(2.7)	11.3	(3.1)
Metric Education	77	(2.1)	1.6	(.4)
Environmental Education	32	(.9)	3.5	(.9)
Drug Abuse Education	29	(.8)	2.8	(.8)
Consumers Education	25	(.7)	2.0	(.6)
Citizenship	22	(.6)	7.7	(2.1)
Sex Education	4	(.1)	.1	(.0)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 13 shows a heavy concentration of studies on language arts, which covers all curricula in communication, and the content areas of language usage, vocabulary development, spelling, handwriting, composition, and reading. As can be seen in the table, over two-thirds of these language arts projects address instruction in reading. As a category in Table 13, reading refers to the course material used to teach reading, whereas the much smaller amount of research shown for reading in Table 7 refers to the cognitive processes that are involved in reading skills.

The other most frequently studied curricula are math, cultural awareness, social studies, science, career education, and health education. Cultural awareness curricula are designed to encourage exposure to various ethnic norms, behaviors, and attitudes, and are often incorporated in bilingual education programs.

The Research Process

Four of the tables present information pertaining to the research process. Table 14 indicates the setting in which the research is conducted or the data collected. Table 15 breaks down research designed to improve or develop specific methods and measurement instruments and techniques. Table 16 shows the frequency with which particular methods and techniques are used in the FY '77 research. (Note that this table refers not to studies which are examining or developing these methods, as in Table 15, but to studies which are simply using them.) Finally, Table 17 displays a breakdown of longitudinal projects into primary content areas.

Target Groups

Table 18 shows that all of the major age groups are well represented in the FY '77 projects. Over half of the projects include children five to ten years of age within their target groups, which is not surprising in that this is the longest age span shown in the table. Children three to four years old, infants, and children one to three years old also are

Table 14

FY '77 Early Childhood Research, by Location of Research

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Classroom	1,589	(43.4)	203.5	(55.3)
Laboratory/Not in Natural Environment	408	(11.1)	29.1	(7.9)
Medical Clinic/Hospital	354	(9.7)	30.0	(8.1)
Home	304	(8.3)	20.8	(5.7)
Group Care Facility (Day or Temporary)	87	(2.4)	12.0	(3.3)
Community Center/Recreational Facility	68	(1.9)	5.3	(1.4)
Residential Institution	38	(1.0	8.0	(2.2)
Place of Employment	10	(.3)	.9	(.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects. Not reflected in this table are 1,161 (31.7%) of the early childhood projects, for which information on location of research was not available.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 15

FY '77 Early Childhood Research on the Research Process

	Projects		Funding	
Category	No.	%[a]	Amt.[b]	%[c]
Total Research on the Research Process	481	(13.1)	51.8	(14.1)
Tests & Measures	296	(8.1)	33.6	(9.1)
For Cognitive Evaluation	95	(2.6)	11.2	(3.1)
For Physical Evaluation	88	(2.4)	6.6	(1.8)
For Affective Evaluation	49	(1.3)	3.4	(.9)
Techniques of Classifying Data	113	(3.1)	10.6	(2.9)
Stastical Analysis	65	(1.8)	7.9	(2.2)
Methods Used in Educational Research	55	(1.5)	7.1	(1.9)
Behavior Observation Techniques	25	(.7)	3.8	(1.0)
Study of Research Bias	14	(.4)	.7	(.2)
Effect of Setting/Research Agent	6	(.2)	.5	(.1)
Cultural/Ethnic Bias	5	(.1)	.008	(.0)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 16

Distribution of FY '77 Early Childhood Research, by Project Characteristics

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Design of Project				
Pretest-Posttest	1,623	(44.3)	198.8	(54.1)
Survey	438	(12.0)	48.5	(13.2)
Longitudinal	359	(9.8)	30.0	(8.2)
Multidisciplinary	121	(3.3)	16.7	(4.5)
Case Study	83	(2.3)	5.9	(1.6)
Cross-Cultural	44	(1.2)	1.5	(.4)
Measure Used in Project				
Named Measure	1,415	(38.6)	163.2	(44.4)
Unnamed Measure	903	(24.6)	115.1	(31.3)
Questionnaire	670	(18.3)	90.5	(24.6)
Interview	573	(15.6)	59.9	(16.3)
Observation	491	(13.4)	45.6	(12.4)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 17

Distribution of FY '77 Early Childhood Projects with Longitudinal Design, by Primary Focus

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
All Areas Combined	359	(9.8)	30.0	(8.2)
The Developmental Process	167	(4.6)	10.1	(2.8)
Physical Development	65	(1.8)	4.4	(1.2)
Cognitive Development	44	(1.2)	2.0	(.5)
Socioemotional Development	34	(.9)	2.4	(.6)
Educational Services	86	(2.3)	12.5	(3.4)
Special Education	30	(.8)	2.0	(.5)
Early Childhood Education	14	(.4)	.8	(.2)
Elementary Education	8	(.2)	1.8	(.5)
Health and Welfare Services	52	(1.4)	4.2	(1.1)
Health Care	36	(1.0)	3.3	(.9)
Welfare	9	(.2)	.8	(.2)
Day Care	2	(.1)	0	(.0)
The Family	29	(.8)	1.8	(.5)
The Broader Social and Physical Environment	11	(.3)	.3	(.1)
Research Methods	10	(.3)	.8	(.2)
Juvenile Justice	4	(.1)	.3	(.1)

Note. Major categories and subcategories within category divisions have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Table 18

FY '77 Early Childhood Research, by Age Group

	Projects		Funding	
Age Group	No.	%[a]	Amt.[b]	%[c]
Five to Ten Years	2,031	(55.4)	238.7	(64.9)
Three to Four Years	799	(21.8)	70.9	(19.3)
Infancy	631	(17.2)	50.9	(13.8)
One to Three Years	475	(13.0)	39.8	(10.8)
Prenatal	133	(3.6)	10.1	(2.7)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects. Not reflected in this table are 1,117 (30.5%) of the early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

involved in sizeable proportions of the projects. Even the prenatal period is examined in 133 projects. It should be noted that 30.5% of the FY '77 projects are not classified according to age because of insufficient information about the exact ages of the children involved in the research.

Table 19 displays information on socioeconomic status, the race or ethnicity, the sex, and the environmental setting of the target groups. A predominance of lower income and minority children is apparent in the table, but again it should be noted that in the majority of projects, information on SES and race was not available. In most of the studies for which information on the sex of the children in the samples could be obtained, both boys and girls are involved. Although information on specific environmental setting also was generally not available, it is apparent that many projects are undertaken in rural areas as well as in metropolitan areas. Were information available for all projects, however, it is likely that the proportion of studies conducted in metropolitan areas would increase more than the proportion of studies in rural areas.

A breakdown of research on children with special characteristics is presented in Table 20. The largest single category is bilingual children, who are involved in almost a fifth of the projects. There are only slightly more studies of physically handicapped children than studies of intellectually handicapped children. Most of the categories shown in the table are the focus of considerable research activity. Delinquents are the least studied of the categories, because most projects on delinquents are targeted on adolescents, and so are not reflected here.

Table 19

FY '77 Early Childhood Research by Demographic Category

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Socioeconomic Status[d]				
Lower Income	786	(21.5)	115.6	(31.4)
Mixed Economically	366	(10.0)	31.6	(8.6)
Middle Income	135	(3.7)	7.9	(2.2)
Race or Ethnic Group[e]				
Hispanic Americans	631	(17.2)	94.0	(25.6)
Mixed Racial/Ethnic Groups	607	(16.6)	68.8	(18.7)
Black	404	(11.0)	43.0	(11.7)
White	391	(10.7)	32.5	(8.8)
Native American	345	(9.4)	34.4	(9.4)
Other Groups	158	(4.3)	21.1	(5.7)
Asian or Pacific Islander	90	(2.5)	13.9	(3.8)
Sex[f]				
Male and Female	693	(18.9)	48.9	(13.3)
Female Only	60	(1.6)	3.0	(.8)
Male Only	45	(1.2)	1.9	(.5)
Environmental Setting[g]				
Metropolitan Area	610	(16.6)	63.0	(17.1)
Urban	233	(6.4)	21.2	(5.8)
Suburban	74	(2.0)	7.0	(1.9)
Rural	362	(9.9)	25.2	(6.8)
Indian Reservation	159	(4.3)	13.9	(3.8)
Mixture of Settings	154	(4.2)	13.4	(3.6)
International	73	(2.0)	4.8	(1.3)
Migrant	22	(.6)	3.4	(.9)

Note. Categories are not mutually exclusive; they have been ranked within major divisions of the table according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

[d] Does not reflect 2,604 (71.1%) of early childhood projects, for which information on SES was not available or not applicable.

[e] Does not reflect 2,205 (60.2%) of early childhood projects, for which information on race/ethnic group was not available or not applicable.

[f] Does not reflect 2,911 (79.4%) of early childhood projects, for which information on sex was not available or not applicable.

[g] Does not reflect 2,563 (70.0%) of early childhood projects, for which information on setting was not available or not applicable.

Table 20

FY '77 Early Childhood Research on Children with Special Characteristics, by Category

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Bilingual	669	(18.3)	99.5	(27.1)
Physically Handicapped	492	(13.4)	51.1	(13.9)
Neurologically Handicapped	197	(5.4)	16.5	(4.5)
Aurally Handicapped	172	(4.7)	11.6	(3.1)
Speech Handicapped	149	(4.1)	10.6	(2.9)
Visually Handicapped	137	(3.7)	8.6	(2.3)
Orthopedically Handicapped	109	(3.0)	7.8	(2.1)
Multihandicapped	97	(2.6)	21.3	(5.8)
Intellectually Handicapped	461	(12.6)	32.5	(8.8)
Mentally Retarded	339	(9.3)	22.8	(6.2)
Learning Disabled	188	(5.1)	13.4	(3.6)
Children at Risk	302	(8.2)	20.7	(5.6)
Premature	49	(1.3)	3.9	(1.1)
Emotionally Ill	329	(9.0)	22.5	(6.1)
Academically Slow	233	(6.4)	14.4	(3.9)
Physically Ill	179	(4.9)	10.0	(2.7)
Abused/Neglected	132	(3.6)	18.3	(5.0)
Gifted	94	(2.6)	5.1	(1.4)
Educationally Disadvantaged	93	(2.5)	15.9	(4.3)
Delinquent	42	(1.1)	5.0	(1.4)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3,664).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($367,680,138).

Selected Comparisons of FY '76 and FY '77 Early Childhood Research Activities

The total number of early childhood projects included in the Interagency Research Information System increased from 3,277 in FY '76 to 3,664 in FY '77 (although the funds for these early childhood projects decreased from $379.5 million in FY '76 to $367.7 million in FY '77). These changes (12% more projects, 3.1% less funds) are factors that must be taken into consideration when figures from this FY '77 Annual Report are compared with those in the FY '76 Annual Report. Figure 9 presents a graph of the growth in projects of the Interagency Research Information System from FY '73 to FY '77. The increases shown reflect some new research activity, but they also reflect the addition to the Information System of continuing projects or funding sources which were not included, for one reason or another in previous years. For instance, in FY '77, projects funded by the National Science Foundation were included in the Information System for the first time. Thus, an increase in the number of projects within a particular area of research does not necessarily indicate a real shift in Federal emphases, but may be an artifact of the enlarged data collection effort.

Other qualifications must be kept in mind when comparing figures for the two years. Each year, efforts are made to improve the coding scheme used to classify research activity for the Information System. Consequently, apparent increases or decreases in activity level also can result primarily from shifts in classification procedures, rather than from actual changes in funding patterns.

Table 21 shows that the overall increase in projects from FY '76 to FY '77 is reflected in most of the major content areas. In fact, the number of projects increases in all but six of the categories shown, and it decreases slightly only in four categories. Most of these increases are small, however. In only six categories is an increase greater than 2% registered, and the largest increase, which is in research on the developmental processes, is only 4.6%. Since these small increases are apparent essentially across the board, it can be concluded that no significant changes in emphases and priorities regarding the areas have

Figure 9
Number of Projects in the Interagency Panel Information System between FY 73 and FY 77

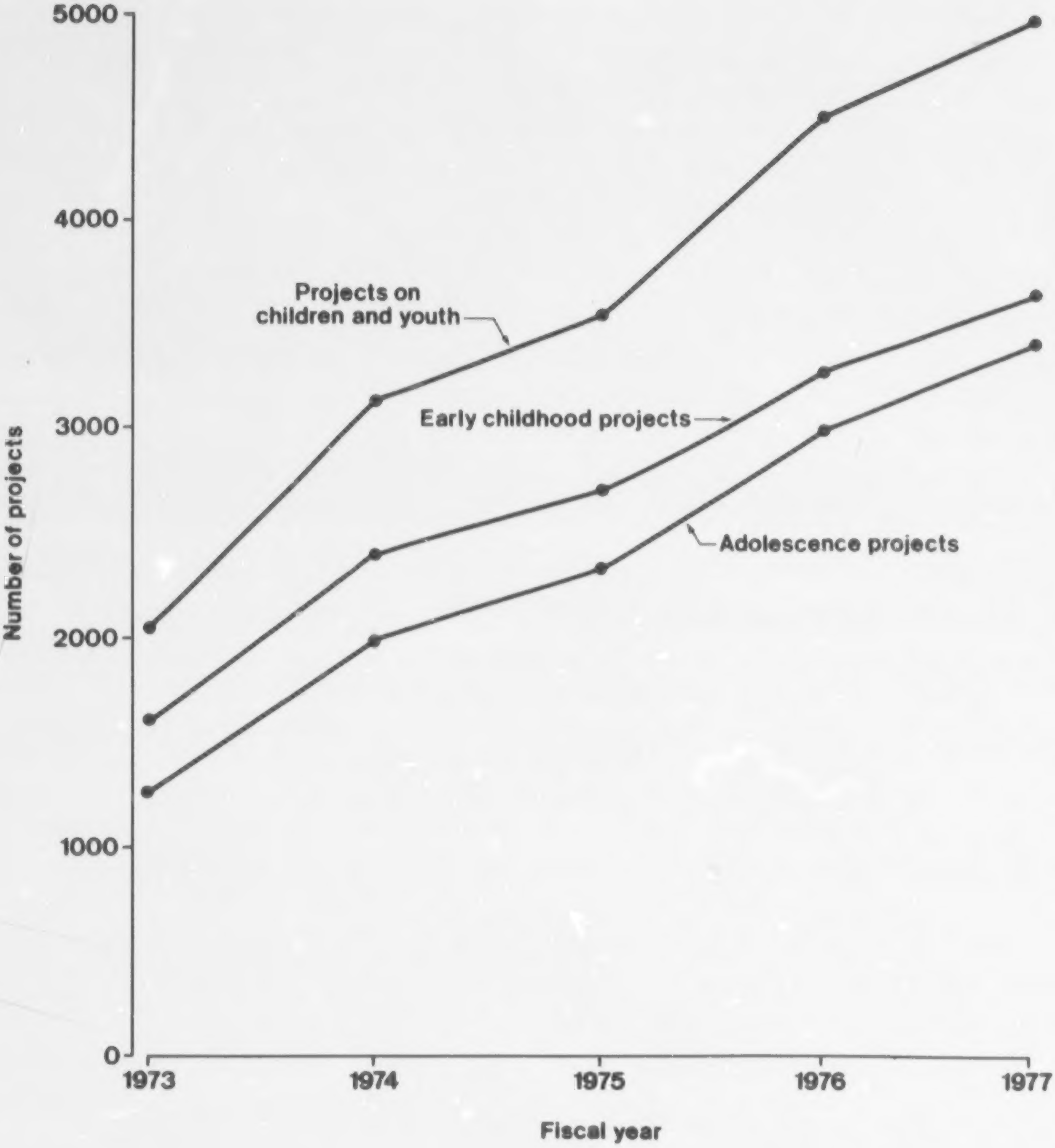


Table 21
Changes in Level of Early Childhood Research Activity from FY '76 to FY '77

Category	No. and % of FY '76 Projects	No. and % of FY '77 Projects
The Developmental Processes	2,012 (61.4%)	2,419 (66.0%)
Physical Development	755 (23.0%)	943 (25.7%)
Cognitive Development	1,208 (36.9%)	1,504 (41.0%)
Socioemotional Development	991 (30.2%)	1,249 (34.1%)
The Family	570 (17.4%)	690 (18.8%)
The Broader Social Environment	556 (17.0%)	718 (19.6%)
Education	2,011 (61.4%)	2,314 (63.2%)
Grades K through 3	1,100 (33.6%)	1,301 (35.5%)
Grades 4 through 6	776 (23.7%)	922 (25.2%)
Grades 7 through 9	470 (14.3%)	584 (15.9%)
Special Education	405 (12.4%)	460 (12.6%)
Preschool Education	271 (8.3%)	361 (9.9%)
Parent Education	195 (6.0%)	186 (5.1%)
Infant Education	67 (2.0%)	85 (2.3%)
Alternative Education	22 (.7%)	33 (.9%)
Health Services	493 (15.0%)	636 (17.4%)
Preventive Health Care	238 (7.3%)	285 (7.8%)
Mental Health Services	246 (7.5%)	277 (7.6%)
Nutrition Programs	188 (5.7%)	215 (5.9%)
Pre- and Post-natal Care	33 (1.0%)	58 (1.6%)
Family Planning	11 (.3%)	11 (.3%)
Welfare Services	187 (5.7%)	227 (6.2%)
Advocacy Services	78 (2.4%)	104 (2.8%)
Child Abuse Prevention/Treatment	73 (2.2%)	82 (2.2%)
Foster Care Services	35 (1.1%)	54 (1.5%)
Emergency Services	20 (.6%)	30 (.8%)
Adoptive Services	17 (.5%)	24 (.7%)
Employment Services	18 (.5%)	21 (.6%)
Day Care	54 (1.6%)	69 (1.9%)
Recreation Programs	29 (.9%)	30 (.8%)
Law Enforcement	21 (.6%)	20 (.5%)
Delinquency Treatment/Prevention	39 (1.2%)	19 (.5%)
TOTAL	3,277 (100 %)	3,664 (100 %)

Note. Categories refer to the general focus of research, and thus are not mutually exclusive.

occurred. The two most likely explanations for these consistent increases are: (1) most of the FY '77 projects are more comprehensive than the FY '76 projects and include factors from a broader array of categories; (2) the FY '77 projects were coded more "liberally" and classified under a wider array of categories. Since a large proportion of the FY '76 projects continued to be active and were funded in FY '77, and thus many projects were represented in the data bases for both years, the first explanation seems the less likely of the two. Furthermore, an examination of the distribution of research by primary focus for the two years appears to support the second explanation. The only major categories in which increases occur are the family (2.5% in FY '76, 2.9% in FY '77), health services (5.2% in FY '76, 5.9% in FY '77), education (58.0% in FY '76, 58.7% in FY '77), early childhood education (2.7% in FY '76, 2.9% in FY '77), and elementary education (16.4% in FY '76, 17.0% in FY '77). Each of these differences is small--less than 1%. With regard to primary focus, no changes occur in research on physical development, day care, and welfare services, and decreases occur in research on the developmental processes, cognitive development, socioemotional development, special education, and research methods. As with the increases, all of these decreases are small.

In summary, the profiles of research activities for the two years are quite similar, and no substantial increase or decrease is apparent in any of the categories.

Summaries of Findings from Federally-Supported Research on Children and Adolescents

In FY '76 the Interagency Panels decided for the first time to include in their Information System summaries of interim or final findings of the projects funded by their member agencies. Table 22 shows the distribution across research areas of the 1,355 projects from which information about findings has been received. It can be seen that the largest concentrations of findings summaries are available in the areas of education (690 projects), the developmental processes (177 projects), and health and welfare services (122 projects).

Table 22

Number of Findings Summaries Available for FY '74 to FY '77 Projects on Children and Adolescents, by Primary Focus

Primary Focus	Number of Projects
Total For All Areas	1,355
The Developmental Processes	177
Physical Development	56
Cognitive Development	53
Socioemotional Development	49
The Family	32
The Broader Social and Physical Environment	23
Health and Welfare Services	122
Day Care	5
Health Care	74
Welfare	29
Educational Services	690
Special Education	80
Early Childhood Education	33
Elementary Education	208
Secondary Education	85
Post-Secondary Education	28
Alternative Education	50
Parent Education	4
Educational Management	21
Juvenile Justice Services	3
Study of Research Methods	21

Note. These figures reflect the findings summaries available from the Interagency Panel Information System as of April, 1978. The figures shown for the general categories do not sum to the total shown above, because 287 of the summaries had not been computerized at the time this report was prepared.

CHAPTER IV

AN ANALYSIS OF FY '77 EARLY CHILDHOOD RESEARCH, BY AGENCY

The FY '77 early childhood research of each agency on the Interagency Panel is described and analyzed in this chapter. A list of the agencies was presented in Table 2 in Chapter III (along with the number of FY '77 early childhood projects and amount of funding for each agency). In the pages that follow, a separate section of the chapter is devoted to each agency. In these analysis sections, which have the same general format (with some minor variations to be explained below). key data are presented concerning the agencies' FY '77 early childhood research programs.

The analysis sections begin with the figures for the agency's FY '77 early childhood projects and funding. In most agencies, information was collected on all projects which were active in FY '77. These include projects which received funds in FY '77 and projects which did not, but were still operating on funds allocated in a prior fiscal year. While the latter kind of research activity is reflected in the project figures, the funding figures shown in the tables refer only to FY '77 monies.

A concise statement of the agency's fundamental mission with respect to early childhood research and development activity is also presented on the first page of each analysis section. Note that for many agencies, the early childhood mission may constitute only a part of their overall research mission, which also may relate to adolescents and adults. Following the mission statement is a brief description of some of the salient aspects of the agency's FY '77 research program.

For some agencies, a brief description of FY '78 priorities is also presented. For the most part, these descriptions are based on agency responses to a questionnaire concerning levels of interest in various research areas and approaches. Both the description of FY '77 research activity and the description of FY '78 plans were prepared by the Social Research Group staff, and do not represent official agency statements.

The remaining portion of the analysis section is tabular, beginning with a bar chart illustrating the percentage of the agency's FY '77 early childhood research pertaining to each of 29 key areas. When appropriate, tables also indicate the distribution of research according to: (1) kind of research (e.g., basic, applied, policy); (2) type of funding arrangement (e.g., grant, contract); (3) location of the research project activity (e.g., laboratory, school, home); (4) age of the children in the sample or target group; and (5) special characteristics of the children in the sample or target group. In addition, the agency's research activity is broken down further into selected subcategories in the following general categories: (1) physical, cognitive, and socioemotional development; (2) the family; (3) instructional techniques; and (4) educational curriculum. When an agency does not support a substantial amount of activity related to one of these general areas, the table (or section of the table) is omitted. Furthermore, within each table, a sub-category is omitted if none of the agency's projects pertain to it.

Information was collected from the Department of Labor, but the data are not included in the following analysis sections because of the relatively small number of projects involved. The Department of Labor supports four projects in FY '77 which involve children under the age of ten. A full description of DOL research is presented in the Adolescence Panel's Annual Report.

Office of the Assistant Secretary for Planning and Evaluation
Office of the Secretary, DHEW

- Mission and/or Functions in Early Childhood Research: $.2 million
- Number of Early Childhood Research Projects Active in FY '77: 16
- Mission and/or Functions in Early Childhood Research:

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) serves as staff to the Secretary, DHEW. ASPE is comprised of several divisions which have specific responsibilities for the areas of health, education, income maintenance, and social services/human development. Within ASPE, primary responsibilities for childhood research and evaluation include: (1) ensuring the policy relevance and substantive merit of agency research and evaluation plans and specific projects; (2) initiating some extramural research and evaluation activities on childhood-related policy issues which cut across individual agency concerns or fall outside the current purview of any single DHEW agency; and (3) supporting in-house analyses of research and evaluation findings and literature as they pertain to particular childhood-related policy issues.

ASPE's role in carrying out its responsibilities in agency-supported research and evaluation includes both facilitating and quality assurance in the development of agency plans and projects. Members of ASPE function as professional peers, offering technical assistance and informal recommendations to agencies and their staff and encouraging interagency coordination of research and evaluation activities. In its quality assurance role, ASPE conducts a formal review of the substantive aspects of agency research and evaluation plans and projects.

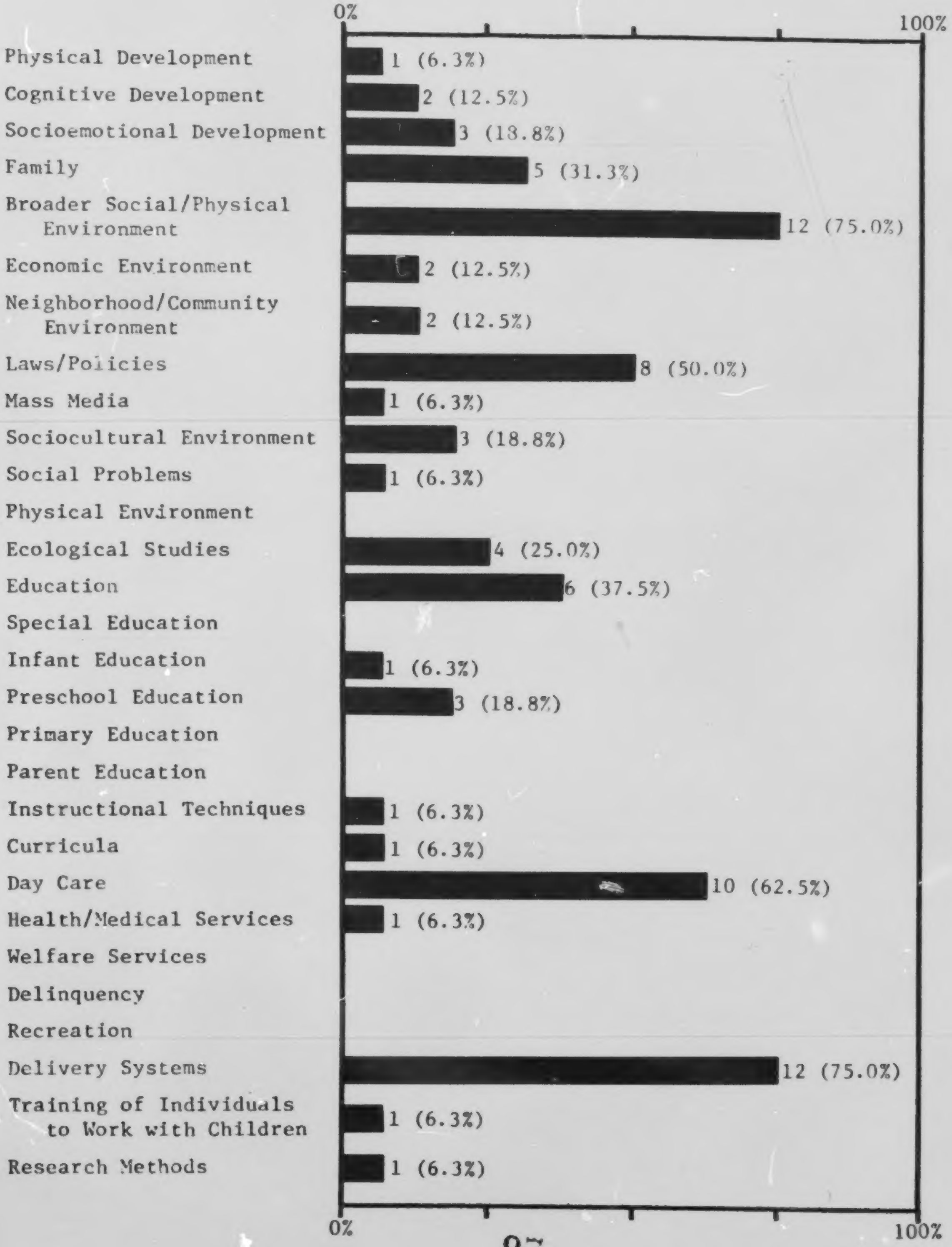
Some child-related research is supported throughout the various divisions of ASPE. The primary extramural research related to children currently supported by the Division of Social Services/Human Development in ASPE includes several policy studies, concept papers and synthesis papers on day care from infancy through adolesence. These papers and studies are part of an overall departmental "Evaluation of the Appropriateness of the Federal Interagency Day Care Requirements," a report due to Congress, Spring, 1978.

Description of FY '77 Early Childhood Activity

ASPE's research consists primarily of policy research (75%) and evaluations of other programs (12.5%). All of the agency's projects are funded through contracts, and most examine some aspect of the broader social environment (75%). For example, half of the studies probe the impact of laws and policies on children. As Figure 10 illustrates, another area of emphasis is delivery systems, examined in three-fourths of ASPE's research projects. Many of the projects focus on day care and educational issues.

Figure 10

Distribution of ASPE FY '77 Early Childhood Research Projects, by Area of Research (N=16)



Note. Categories are not mutually exclusive.

Table 23

Distribution of ASPE FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Policy	12	(75.0)
Evaluation	2	(12.5)
Applied	1	(6.3)
Support and Utilization	1	(6.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total ASPE FY '77 early childhood research (16 projects).

Table 24

Distribution of ASPE FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Contract	16	(100)
Sole Source	11	(68.8)
Competitive	5	(31.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total ASPE FY '77 early childhood research (16 projects).

Table 25

Distribution of ASPE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	3	(18.8)
Three to Four Years	3	(18.8)
One to Three Years	1	(6.3)
Infancy	1	(6.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 13 (81.2%) of the ASPE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total ASPE FY '77 early childhood research (16 projects).

Table 26

Breakdown of ASPE FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	5	(31.3)
Family/Society Interface	5	(31.3)
Child Care Arrangements	4	(25.0)
Impact of Family on Education	3	(18.8)
Child Rearing	1	(6.3)
Working Mother	1	(6.3)

Note. Categories are not mutually exclusive; they are ranked according to the number of projects.

[a] Percentage of total ASPE FY '77 early childhood research (16 projects).

Table 27

Breakdown of ASPE FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	1	(6.3)
Motor Development	1	(6.3)
Nutrition	1	(6.3)
Physical Factors relating to Education	1	(6.3)
Total Research on Cognitive Development	2	(12.5)
Cognitive Achievement	2	(12.5)
Cognitive Factors relating to Education	2	(12.5)
Perception	1	(6.3)
Problem Solving	1	(6.3)
Memory	1	(6.3)
Concept Formation	1	(6.3)
Total Research on Socioemotional Development	3	(18.8)
Socioemotional Factors relating to Education	3	(18.8)
Interpersonal Relationships	2	(12.5)
Perception of Self	1	(6.3)
Attitudes	1	(6.3)
Motivation	1	(6.3)
Development of Values/Morals	1	(6.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total ASPE FY '77 early childhood research (16 projects).

Division of Program Development
Office of Planning, Research, and Evaluation
Office of Human Development Services, DHEW

- Mission and/or Functions in Early Childhood Research:

The Office of Planning, Research, and Evaluation (OPRE) is a staff unit within the Office of Human Development Services (HDS). OPRE is responsible for program planning, research, demonstration, evaluation, policy analysis and systems development. Within OPRE, the Division of Program Development has responsibility for research and demonstration activities of both a domestic and international nature. The Division's two basic domestic research functions are: (1) to provide guidance to the five Program Administrations within HDS in the planning and administration of their RD&E resources, and (2) to plan and manage its own crosscutting, HDS priority research and demonstration activities.

The primary concern of the crosscutting initiative is to impact upon the HDS' categorical target populations (the vulnerable and disadvantaged of our society, focussing on children, youth, families, elderly citizens, Native Americans, and handicapped individuals). To achieve this end, the Division of Program Development has focussed all of its crosscutting R&D activities within the following four objectives: (1) to identify unmet and future needs of HDS target groups; (2) to improve design and operation of human service delivery systems to better meet the needs appropriate to the goals and objectives that they are designed to achieve; and (4) to support priority projects overlapping objectives 1, 2, and 3 that are related to the political, economic, and legal dimensions of the services environment. The Division of Program Development has developed this approach to RD&E planning based on the recognition of the common elements and information needs of Program Administrations. It establishes a mechanism within HDS to systematically identify and develop projects containing a cross-program element.

Note. OPRE sponsored 4 projects in Fiscal Year '77 which are included in IRIS under Title XX. The 1978 Annual Report will include a full description of OPRE's cross-cutting R&D initiative.

Administration for Children, Youth, and Families
Office of Human Development Services, DHEW

- FY '77 Funding of Early Childhood Research: $ 29.2 million
- Number of Early Childhood Research Projects Active in FY '77: 246
- Mission and/or Functions in Early Childhood Research:

The ACYF is concerned with issues which address children primarily, which address youth primarily and still others which address the family in its child and youth rearing roles. Those aspects which address children primarily are linked to the programmatic activities which focus on meeting the developmental needs of preschool-age children from low-income families and on improving services to particular populations of vulnerable children, such as the abused or neglected, and dependent children, such as those in foster care, those in need of adoptive homes, and those in institutions. Aspects of the mission which address youth primarily include concerns for status offenders, teenage pregnancies, and the program of runaway youth. The concerns for youth also include the promotion of the development of all youth as well as vulnerable youth, with particular concern for adolescent abuse and neglect, school related problems, pregnancy and VD. Those aspects of the mission which address families primarily are linked to the programmatic activities of children and youth, as described above, and to activities and policies pertaining to the well-being and development of children, youth and families.

The ACYF mission also includes the development of information on problems and trends affecting child, youth and family life, analysis of information on service programs, the recommending and reviewing of legislative proposals, and the providing of leadership in the development of priorities and strategies for research, demonstration, and experimental efforts on children, youth and families. In addition, through such activities as the development of model legislation and standards, the provision of technical assistance, and the conduct of demonstration projects, the mission includes the stimulation of institutional changes at the Federal, State and local level in order to improve the delivery of services to children, youth and families. The mission requires an examination of issues and policies and an advisement to the Assistant Secretary for Human Development Services about which service and benefit systems are at present improving child, youth and family development, which systems are not achieving the purpose, and what systems need to be designed and tested to assure the desired development. Also, there is need to consider children and youth in the context of the family. Thus, concerns for children and youth, such as child abuse and neglect, runaway youth, children at risk and in poverty, youth involved in drug and alcohol abuse and delinquent acts, must include concerns for the family in the resolution of the problems. Further, the mission requires a consideration of continuity of development - development over time - and the implications of that concept for programs, services, and their assessment.

ACYF serves as an advocate for children, youth and families by identifying social change that may enhance or adversely affect them, by identifying conditions which enhance or adversely affect their development, by defining issues critical to their development, and by recommending solutions and policies which address the issues. The agency is to bring the needs of children, youth and families to the attention of government and the public.

This mission helps ACYF examine the problems of children, youth and families from the larger, ecological perspective. The larger perspective permits the study of issues which involve many services, many institutions and the changes in services and institutional supports over the years. It also permits a study of interactions between and among family members and service providers. In short, the full scope of development and the full range of services and supports become the domain for ACYF, RD&E concerns.

More specifically, the mission provides the basis and justification for undertaking RD&E activities which are program linked and also address issues that may lead to new programmatic initiatives, to new knowledge about the needs of various populations and to new policies enhancing child, youth and family development.

Description of FY '77 Early Childhood Activity

Forty-three percent of ACYF's early childhood projects in FY '77 are applied research, while only 13% are basic research activities. The majority of the agency's efforts continue to be devoted to child welfare and development, particularly within the context of the family and community. Figure 11 shows ACYF's commitment toward examining the family (52%), as well as the broader social and physical environment (48.0%). Within the area of the family, primary emphasis is on parental roles and behavior (22.4%), although substantial percentages also can be seen for family/society interface, parent-child relationships and family structure (19.9%, 17.9%, and 16.7%, respectively). Within the area of the broader social and physical environment, social problems (23.6%) and the sociocultural environment (17.9%) receive the most attention.

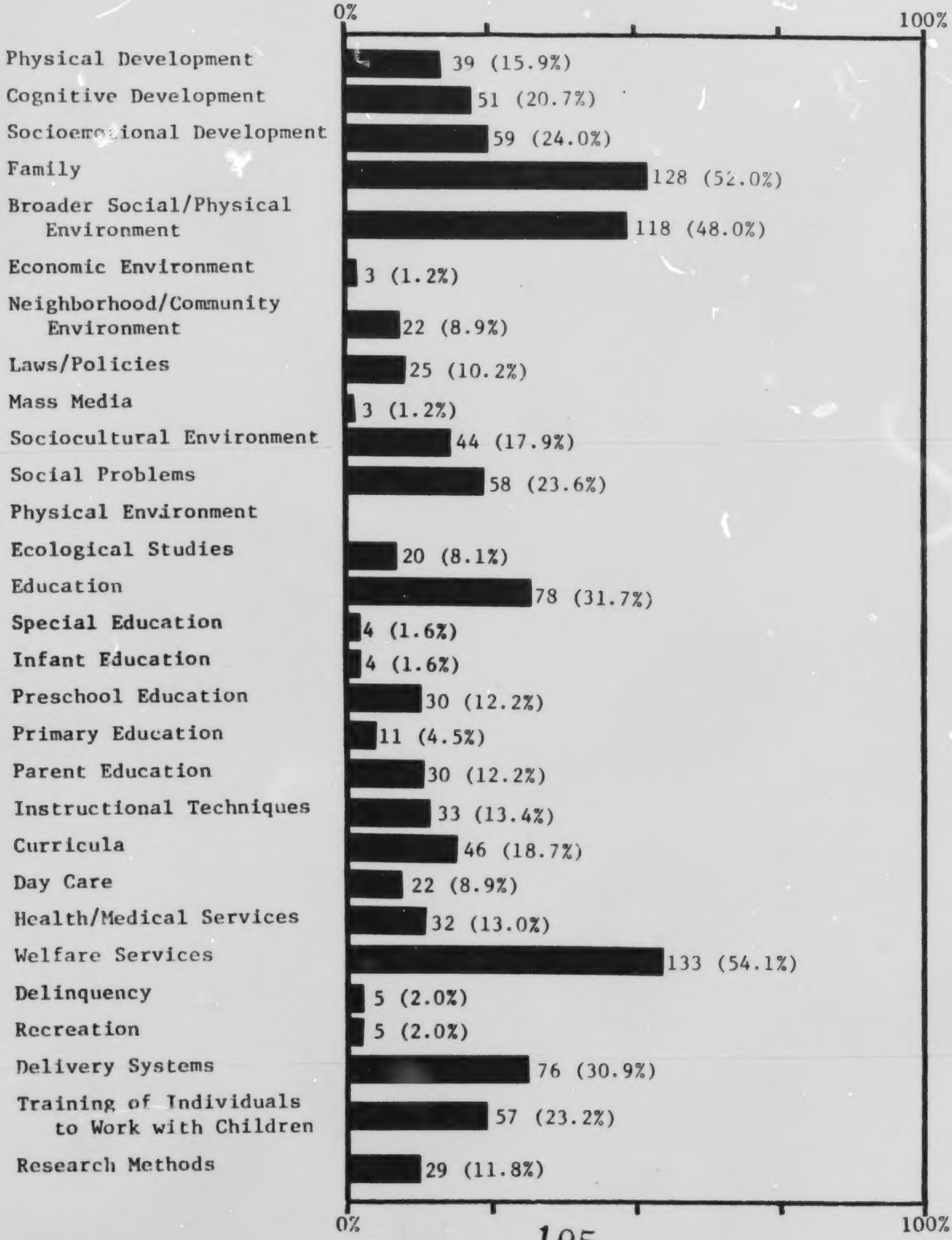
ACYF's overall concern for the development of the child is aptly reflected in its focus on physical development (15.9%), cognitive development (20.7%) and socioemotional development (24.0%). Particular attention is devoted to abused/neglected children, with 35.8% of the agency projects being targeted toward this special group. Applied research activities center on the provision of both welfare services (54.1%) and educational services (31.7%), which includes preschool and parent education (each involved in 12.2% of ACYF's research projects).

Plans for FY '78

ACYF will continue to sponsor projects that have family issues as their main components. High priority areas include family structure, family functioning, the family's interface with society, parenting skills, the neighborhood, and social and physical (housing) environments. ACYF will also concentrate on the delivery of educational, health and welfare services to preschool age children, particularly minorities and the disadvantaged. Day care, bilingual instruction, the diagnosis and prevention of child abuse, foster care and adoption services also are listed in Appendix A as areas of high agency interest. Areas of moderate concern include the physical environment of the home, family health, cognitive, socio-emotional and physical development, social and peer influences, mass media and television, impact of day care on the family/child and its alternatives, infant and special education, curricula, innovative teaching techniques, basic skills and reading. Ecological studies, research on the whole child, and studies of the combined or comparative effects of social programs also will be stressed.

Figure 11

Distribution of ACYF FY '77 Early Childhood Research Projects, by Area of Research (N=246)



Note. Categories are not mutually exclusive.

Table 28

Distribution of ACYF FY '77
Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	106	(43.1)
Evaluation	37	(15.0)
Demonstration	34	(13.8)
Basic	32	(13.0)
Policy	24	(9.8)
Social Accounting	7	(2.8)
Support and Utilization	6	(2.4)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Table 29

Distribution of ACYF FY '77 Early Childhood
Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	189	(76.8)
Competitive	176	(71.5)
Contract	57	(23.2)
Competitive	47	(19.1)
Sole Source	2	(.8)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Table 30

Distribution of ACYF FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Home	30	(12.2)
Medical Clinic/Hospital	28	(11.4)
Classroom	18	(7.3)
Group Care Facility	15	(6.1)
Community Center	13	(5.3)
Residential Institution	3	(1.2)
Laboratory	2	(.8)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 157 (63.8%) of the ACYF early childhood projects, for which information on location of research was not available.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Table 31

Distribution of ACYF FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Three to Four Years	82	(33.3)
Five to Ten Years	61	(24.8)
One to Three Years	56	(22.8)
Infancy	49	(19.9)
Prenatal	8	(3.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 144 (58.5%) of the ACYF early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Table 32

Breakdown of ACYF FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Abused/Neglected	88	(35.8)
Emotionally Ill	31	(12.6)
Children at Risk	22	(8.9)
Bilingual	9	(3.7)
Delinquent	4	(1.6)
Physically Handicapped	3	(1.2)
Educationally Disadvantaged	3	(1.2)
Intellectually Handicapped	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Table 33

Breakdown of ACYF FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	39	(15.9)
Child Abuse/Neglect	22	(8.9)
Pregnancy and Childbirth	6	(2.4)
Motor Development	5	(2.0)
Sensory Processes	2	(.8)
Physical Factors relating to Education	2	(.8)
Body Growth	1	(.4)
Nutrition	1	(.4)

Table 33 (Continued)

Breakdown of ACYF FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	51	(20.7)
Cognitive Achievement	34	(13.8)
Language Development	14	(5.7)
Cognitive Factors relating to Education	12	(4.9)
Learning Processes	7	(2.8)
Perception	3	(1.2)
Problem Solving	3	(1.2)
Reading	2	(.8)
Play	2	(.8)
Creativity	2	(.8)
Memory	1	(.4)
Total Research on Socioemotional Development	59	(24.0)
Attitudes	23	(9.3)
Perception of Self	19	(7.7)
Emotional Development	18	(7.3)
Interpersonal Relationships	14	(5.7)
Socioemotional Factors relating to Education	12	(4.9)
Personality	6	(2.4)
Development of Values/Morals	6	(2.4)
Motivation	3	(1.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Table 34

Breakdown of ACYF FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	128	(52.0)
Parental Roles/Behavior	55	(22.4)
Family/Society Interface	49	(19.9)
Parent-Child Relationships	44	(17.9)
Family Structure	41	(16.7)
Child Rearing	34	(13.8)
Impact of Family on Education	21	(8.5)
Family Health	19	(7.7)
Physical Environment of the Home	10	(4.1)
Child Care Arrangements	8	(3.3)
Sibling Relationships	4	(1.6)
Working Mother	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total ACYF FY '77 early childhood research (246 projects).

Administration for Public Services, Office of Human Development Services, DHEW

- FY '77 Funding of Early Childhood Research: $1.0 million
- Number of Early Childhood Research Projects Active in FY '77: 16
- Mission and/or Function in Early Childhood Research:

The Administration for Public Services research, demonstration, and evaluation program seeks to improve the level of service to recipients by improving management, operation, and policy-making for the Title XX program. RD&E has two basic goals: (1) to develop the analytic methodologies, the program data, and the programmatic knowledge needed to evaluate, improve, and implement major policy and program options; and (2) to develop the methodological and technological knowledge necessary to improve Federal, State, and local administration and delivery of services.

The RD&E program is directed toward upgrading the positive impact of social services programs on individuals and families, and toward strengthening capabilities of State and local social services providers. The RD&E program acts to determine the effectiveness and efficiency of social services programs, to develop and implement R&D to identify gaps in knowledge and provide new knowledge, to test new methods for improving client access to services, and to support demonstrations to test new methods of service delivery.

Description of FY '77 Early Childhood Activity

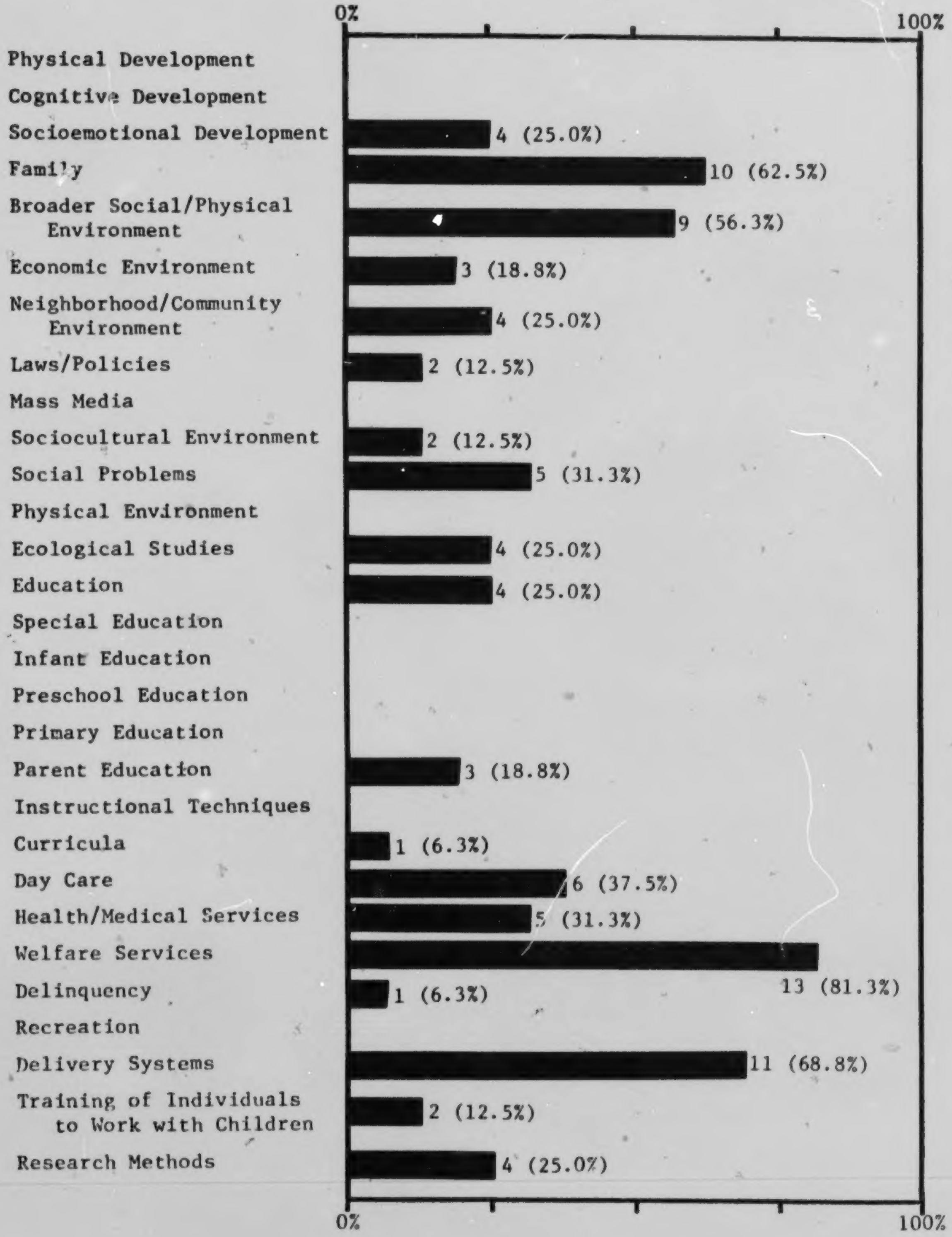
APS FY '77 projects are distributed over a number of different research areas. The area receiving the most attention is welfare services (81.3%). In 68.8% of these projects, the delivery system itself is the target of investigation.

Other categories receiving considerable attention include the family (62.5%), the broader social environment (56.3%), day care (37.5%) and health/medical services (31.3%). A breakdown of the research conducted on the family reveals primary concentration on several variables: family/society interface (50%), family health (37.5%), family structure, and child care arrangements (31.3% each).

APS childhood research projects are funded exclusively through research grants, and most are applied research (43.8%). One-fourth of the projects are related to policy research, while another 12.5% are research support and utilization activities. Many of these projects involve children with special characteristics, particularly children at risk (31.3%) and abused/neglected children (31.3%).

Figure 12

Distribution of APS FY '77 Early Childhood Research Projects, by Area of Research (N=16)



Note. Categories are not mutually exclusive.

Table 35

Distribution of APS FY '77
Early Childhood Projects, by Kind of Researcn

Kind of Research	No.	%[a]
Applied	7	(43.8)
Policy	4	(25.0)
Support and Utilization	2	(12.5)
Evaluation	1	(6.3)
Social Accounting	1	(6.3)
Demonstrations	1	(6.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total APS FY '77 early childhood research (16 projects).

Table 36

Distribution of APS FY '77 Early Childhood
Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	16	(100)
Competitive	9	(56.3)
Non-Competitive	2	(12.5)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total APS FY '77 early childhood research (16 projects).

Table 37

Distribution of APS FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Group Care Facility	2	(12.5)
Community Center	2	(12.5)
Residential Institution	2	(12.5)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 10 (62.5%) of the APS early childhood projects, for which information on location of research was not available.

[a] Percentage of total APS FY '77 early childhood research (16 projects).

Table 38

Breakdown of APS FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Children at Risk	5	(31.3)
Abused/Neglected	5	(31.3)
Physically Handicapped	1	(6.3)
Intellectually Handicapped	1	(6.3)
Emotionally Ill	1	(6.3)
Delinquent	1	(6.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total APS FY '77 early childhood research (16 projects).

Table 39

Breakdown of APS FY '77 Early Childhood Research Projects on Socioemotional Development

Category	No.	%[a]
Total Research on Socioemotional Development	4	(25.0)
Perception of Self	3	(18.8)
Attitudes	3	(18.8)
Emotional Development	3	(18.8)
Interpersonal Relationships	3	(18.8)
Motivation	3	(18.8)
Personality	2	(12.5)
Development of Values/Morals	1	(6.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total APS FY '77 early childhood research (16 projects).

Table 40

Breakdown of APS FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	10	(62.5)
Family/Society Interface	8	(50.0)
Family Health	6	(37.5)
Family Structure	5	(31.3)
Child Care Arrangements	5	(31.3)
Parent-Child Relationships	2	(12.5)
Parental Behavior/Roles	2	(12.5)
Child Rearing	2	(12.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total APS FY '77 early childhood research (16 projects).

Rehabilitation Services Administration
Office of Human Development Services, DHEW

- FY '77 Funding of Early Childhood Research: $.1 million
- Number of Early Childhood Research Projects Active in FY '77: 6
- Mission and/or Function in Early Childhood Research:

The research and evaluation program of the Rehabilitation Services Administration supports research designed to produce new knowledge, methods, and devices to improve the rehabilitation of handicapped persons, especially those who are severely disabled. The research is interdisciplinary and multifaceted, with attention to Research and Training Centers in universities, Rehabilitation Engineering Centers, spinal cord injury, end-stage renal disease, internationl research, sensory disorders, vocational counseling and placement, and utilization of research and evaluation results.

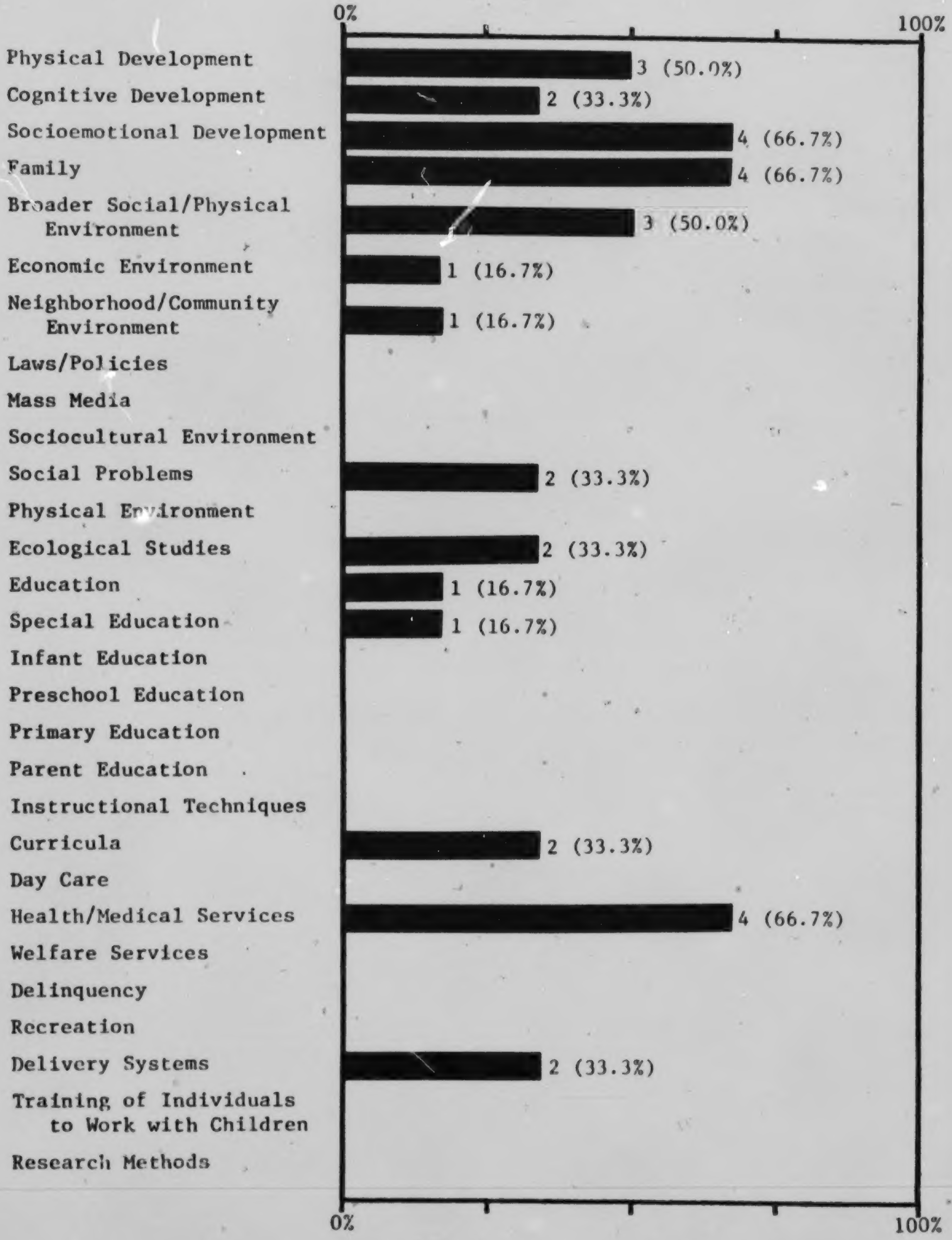
Evaluation projects stress careful evaluation of all aspects of the service program in the field, and of all research and demonstration activities.

Description of FY '77 Early Childhood Activity

In FY '77 RSA funded six grants pertaining to children, three of which are applied research. The other three are classified as basic research, evaluation, and demonstration. As Table 43 indicates, the physically handicapped and the intellectually handicapped are two major target groups. Areas of high activity are socioemotional development (66.7%), the family (66.7%) and health and medical services (66.7%). Within the family area, primary emphasis is placed on parental roles/behavior (50%) and family health (50%). Within the general area of developmental processes, physical handicaps and emotional development stand out.

Figure 13

Distribution of RSA FY '77 Early Childhood Research Projects, by Area of Research (N=6)



Note. Categories are not mutually exclusive.

Table 41

Distribution of RSA FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	3	(50.0)
Basic	1	(16.7)
Evaluation	1	(16.7)
Demonstrations	1	(16.7)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total RSA FY '77 early childhood research (6 projects).

Table 42

Distribution of RSA FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	6	(100)
Non-Competitive	2	(33.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total RSA FY '77 early childhood research (6 projects).

Table 43

Breakdown of RSA FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Physically Handicapped	2	(33.3)
Intellectually Handicapped	2	(33.3)
Emotionally Ill	1	(16.7)
Physically Ill	1	(16.7)
Delinquent	1	(16.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total RSA FY '77 early childhood research (6 projects).

Table 44

Breakdown of RSA FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	4	(66.7)
Parental Behavior/Roles	3	(50.0)
Family Health	3	(50.0)
Parent-Child Relationships	1	(16.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total RSA FY '77 early childhood research (6 projects).

Table 45

Breakdown of RSA FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	3	(50.0)
Physical Handicaps	3	(50.0)
Physical Factors relating to Education	2	(33.3)
Motor Development	2	(33.3)
Physical Disease	1	(16.7)
Pregnancy and Childbirth	1	(16.7)
Body Growth	1	(16.7)
Physical Characteristics	1	(16.7)
Total Research on Cognitive Development	2	(33.3)
Intellectual Handicaps	2	(33.3)
Cognitive Factors relating to Education	2	(33.3)
Cognitive Achievement	1	(16.7)
Total Research on Socioemotional Development	4	(66.7)
Emotional Development	3	(50.0)
Attitudes	2	(33.3)
Socioemotional Factors relating to Education	2	(33.3)
Perception of Self	1	(16.7)
Interpersonal Relationships	1	(16.7)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total RSA FY '77 early childhood research (6 projects).

Bureau of Community Health Services
Health Services Administration
Public Health Service, DHEW

- FY '77 Funding of Early Childhood Research: $5.0 million
- Number of Early Childhood Research Projects Active in FY '77: 61
- Mission and/or Functions in Early Childhood Research:

The Bureau of Community Health Services receives its authority to sponsor research and evaluation studies from Title 5, Section 512, of the Social Security Act. From this context the Bureau of Community Health Services Maternal and Child Health and Crippled Children's Research Grants Program has been committed to investigate problems related to adolescent health in general, and particularly to problems associated with teenage pregnancy, the handicapped and retarded adolescents. In addition, the research grants program supports scientific studies that show the promise of improving the operation, functioning, general usefulness and effectiveness of health services for mothers and children.

These include research in delivery of health care to mothers and children, habilitation and rehabilitation of handicapped children, regional programs for high risk mothers and infants, and the study of manpower for the care of mothers and children.

Description of FY '77 Early Childhood Activity

Most of the FY '77 research projects focus on health and medical services for mothers and children (57.4%) as well as the physical development of the child (82%). Major areas of concern relating to physical development include pregnancy and childbirth (45.9%), body growth (27.9%), and physical disease (26.2%).

In addition to its primary concern with the physical aspects of the child's development, BCHS also supports research efforts on the family (37.7%). Within the family area, topics of particular emphasis are parent-child relationships (16.4%) and parental roles and behavior (16.4%).

Of the 61 BCHS projects, all are grants, most of whose recipients are located at medical clinics and hospitals (65.6%). The majority (73.8%) of these projects involve infants, although children aged one to ten years also are addressed by many of the agency's projects. Many of these children are considered either at risk (37.7%) or physically ill (21.3%).

Plans for FY '78

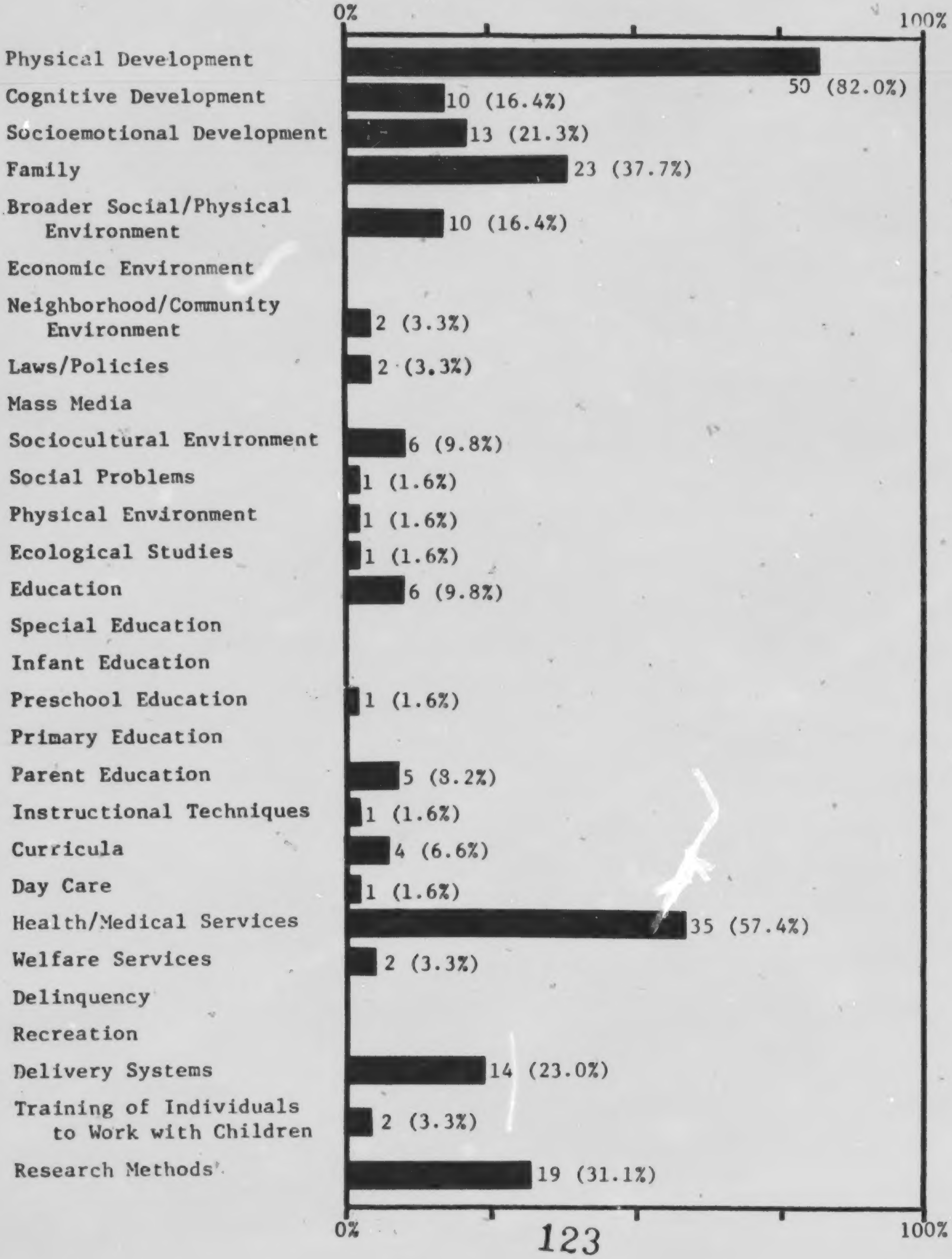
Beginning in fiscal year 1978 and continuing thereafter for a number of years, the Bureau of Community Health Services will increase research activity in the determinants and consequences of teenage pregnancy. The major concern in these areas will be the behavioral aspects of adolescents and the determinants and consequences as these variables affect the teenager.

Examples of questions that this research effort will try to answer are: Why do young girls get pregnant when family planning services appear to be an available option? How can sex education be made more effective? How can the teenager's environment be modified in a health setting from the standpoint of socioeconomic goals and educational attainment to avoid early pregnancy? What interventions emanating from health care settings and programs are truly effective in preventing risk outcomes, i.e., prematurity, subsequent pregnancies, or in ameliorating the psycho-educational effects of adolescent pregnancy on the mother and offspring?

Concurrently with these service delivery oriented, research priorities there will be research efforts in other aspects of adolescent health: focusing on low-risk sub-groups or on the entire risk spectrum of the adolescent population, the intention being to accumulate a body of facts from which to draw in developing new program approaches or in modifying existing ones. Examples of the topics which will be encouraged in contacts with prospective applicants are: (1) decision-making in matters of health (i.e., when to see a physician, to use or not to use contraception, to keep or not to keep the infant); (2) risk-taking in general; (3) primacy of health considerations in the everyday life of the adolescent; (4) the utilization of health services by adolescents in different types of health care settings; (5) design and methodological considerations in adolescent health research; and (6) evaluation of the concept of comprehensiveness in health services delivery to adolescents.

Figure 14

Distribution of BCHS FY '77 Early Childhood Research Projects, by Area of Research (N=61)



Note. Categories are not mutually exclusive.

Table 46

Distribution of BCHS FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	35	(57.4)
Basic	17	(27.9)
Policy	4	(6.6)
Evaluation	2	(3.3)
Social Accounting	2	(3.3)
Demonstrations	1	(1.6)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Table 47

Distribution of BCHS FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	61	(100)
Non-Competitive	30	(49.2)
Competitive	17	(27.9)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Table 48

Distribution of BCHS FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Medical Clinic/Hospital	40	(65.6)
Home	11	(18.0)
Laboratory	4	(6.6)
Group Care Facility	3	(4.9)
Classroom	2	(3.3)
Community Center	1	(1.6)
Residential Institution	1	(1.6)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 12 (19.7%) of the BCHS early childhood projects, for which information on location of research was not available.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Table 49

Distribution of BCHS FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Infancy	45	(73.8)
One to Three Years	29	(47.5)
Three to Four Years	25	(41.0)
Five to Ten Years	23	(37.7)
Prenatal	12	(19.7)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 3 (4.9%) of the BCHS early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Table 50

Breakdown of BCHS FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Children at Risk	23	(37.7)
Premature	5	(8.2)
Physically Ill	13	(21.3)
Physically Handicapped	8	(13.1)
Intellectually Handicapped	4	(6.6)
Abused/Neglected	4	(6.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Table 51

Breakdown of BCHS FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	23	(37.7)
Parent-Child Relationships	10	(16.4)
Parental Behavior/Roles	9	(14.8)
Family Health	8	(13.1)
Family Structure	6	(9.8)
Child Rearing	5	(8.2)
Child Care Arrangements	1	(1.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Table 52

Breakdown of BCHS FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	50	(82.0)
Pregnancy and Childbirth	28	(45.9)
Body Growth	17	(27.9)
Physical Disease	16	(26.2)
Motor Development	10	(16.4)
Nutrition	8	(13.1)
Physical Characteristics	7	(11.5)
Physical Handicaps	6	(9.8)
Epidemiology	6	(9.8)
Sensory Processes	2	(3.3)
Child Abuse	2	(3.3)
Genetics	1	(1.6)
Total Research on Cognitive Development	10	(16.4)
Cognitive Achievement	7	(11.5)
Perception	3	(4.9)
Attention	3	(4.9)
Language Development	2	(3.3)
Intellectual Handicaps	1	(1.6)
Total Research on Socioemotional Development	13	(21.3)
Emotional Development	7	(11.5)
Interpersonal Relationships	2	(3.3)
Personality	2	(3.3)
Perception of Self	1	(1.6)
Attitudes	1	(1.6)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total BCHS FY '77 early childhood research (61 projects).

Health Care Financing Administration, DHEW

- FY '77 Funding of Early Childhood Research: $1.4 million
- Number of Early Childhood Research Projects Active in FY '77: 16
- Mission and/or Functions in Early Childhood Research:

HCFA grants may be made for research, planning or conduct of demonstrations, conferences, or data collection activities. The grant activities funded by HCFA are intended to assist in the resolution of major health financing policy and program issues and to assist in developing new methods for the administration of HCFA programs. In general HCFA will consider funding projects which:

> Develop or demonstrate new financing mechanisms or controls, management or administrative procedures, service delivery concepts or technological innovations designed to improve HCFA programs, or
>
> Develop knowledge about the basic nature of costs and inflation in the health care field or the economic and behavioral relationships between health care financing methods and the activities in the health care sector.

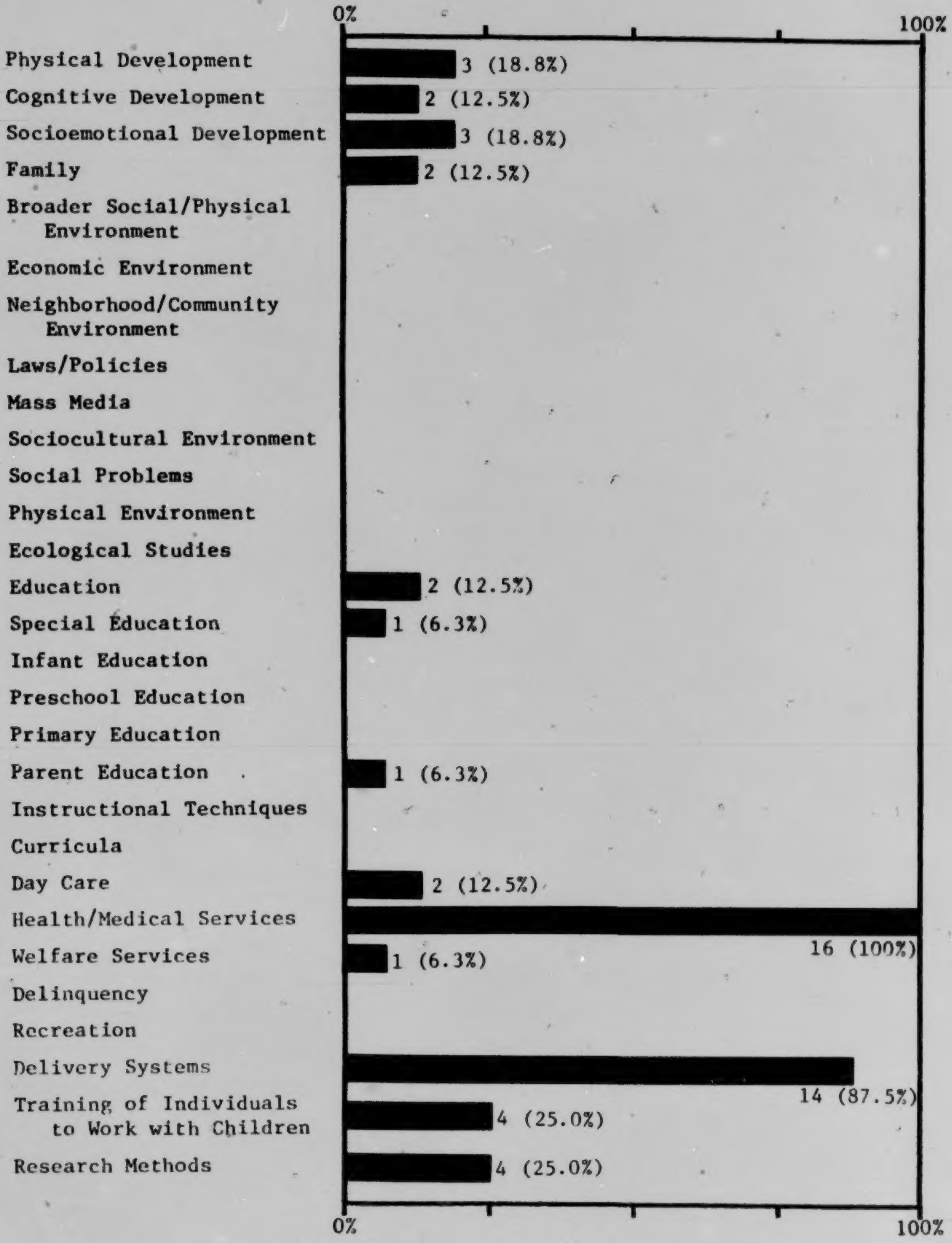
Description of FY '77 Early Childhood Activity

HCFA supports various types of research activity, evenly distributed across applied research, evaluations, and demonstrations (37.5%, 31.3%, and 31.3%, respectively). Most of these are grants (93.8%) aimed at a cross-section of childhood ages (see Table 56). Over a third of the projects are carried out in medical clinics and hospitals.

Each project includes the health/medical services as a significant component. Many of these are implementations of the EPSDT program (Early Periodic Screening and Diagnostic Testing), which is concerned with early detection and primary prevention.

Figure 15

Distribution of HCFA FY '77 Early Childhood Research Projects, by Area of Research (N=16)



Note. Categories are not mutually exclusive.

Table 53

Distribution of HCFA FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	6	(37.5)
Evaluation	5	(31.3)
Demonstrations	5	(31.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total HCFA FY '77 early childhood research (16 projects).

Table 54

Distribution of HCFA FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	15	(93.8)
Competitive	14	(87.5)
Non-Competitive	1	(6.3)
Agreement	1	(6.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total HCFA FY '77 early childhood research (16 projects).

Table 55

Distribution of HCFA FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Medical Clinic/Hospital	6	(37.5)
Group Care Facility	2	(12.5)
Classroom	1	(6.3)
Home	1	(6.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 7 (43.8%) of the HCFA early childhood projects, for which information on location of research was not available.

[a] Percentage of total HCFA FY '77 early childhood research (16 projects).

Table 56

Distribution of HCFA FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Three to Four Years	5	(31.3)
Five to Ten Years	4	(25.0)
One to Three Years	4	(25.0)
Infancy	3	(18.8)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 11(68.8%) of the HCFA early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total HCFA FY '77 early childhood research (16 projects).

National Institute of Child Health and Human Development
National Institutes of Health, DHEW

- FY '77 Funding of Early Childhood Research: $ 27.2 million
- Number of Early Childhood Research Projects Active in FY '77: 427
- Mission and/or Functions in Early Childhood Research:

The mission of the National Institute of Child Health and Human Development is to contribute to the good health of all citizens through efforts to understand the many factors, biological and behavioral, related to the adaptation of populations to available resources and the expansion of knowledge on family planning, child health, maternal health and human development. The primary emphasis of Institute efforts is prevention of disease and disability and the underlying assumption is that success achieved by the NICHD in assuring healthier children will produce the long range benefit of a healthier adult population for the nation.

A number of agencies within the Department of Health, Education, and Welfare carry out programs directed toward the study of populations, family planning, and improved health for mothers and children. The National Institute of Child Health and Human Development serves as a focal point, coordinator, and major research arm for these endeavors. The goals of the NICHD are accomplished through research to assure maximum health during pregnancy and infancy as well as to provide conditions for optimum development of the child so that full physical and mental potential can be attained by the adult. Interdependent with the goals are a broad understanding of social and societal environment, family structure and function, the factors affecting fertility and infertility, the dynamics of human population, and the reasonable regulation of its growth. Thus, NICHD has an interest in all problems affecting human development.

To accomplish its goals, the NICHD has developed a Center for Population Research (CPR) and a Center for Research for Mothers and Children (CRMC). The CPR has responsibility for understanding the forces affecting population growth and their social consequences, the development of contraceptive methods, and discovering the factors that determine acceptability of contraceptive methods and how these influence fertility patterns. The CRMC has responsibility to advance knowledge on societal and social environment, family relationships, pregnancy, infancy and childhood as well as to examine the problems of human development from a psychosocial and biological standpoint, with special reference to the cause and amelioration of the problems of the mentally retarded. It is responsible for understanding all factors related to the good health of mothers and children and will be concerned with health problems occurring in the earliest stages of development through adulthood.

Note. Some of the NICHD projects classified separately in IRIS are actually components of the same large program. Therefore, the number of FY '77 early childhood projects shown here for NICHD is larger than the number shown in NICHD's own files.

Description of FY '77 Early Childhood Activity

Most of the NICHD projects are grants (85.9%), for basic research (60%) or applied activities (37%). A substantial amount of this research is directed at infants (50.6%) and at children with special characteristics, particularly children at risk (32.3%), physically ill children (30.9%), intellectually handicapped (28.1%) or physically handicapped children (13.1%). Most of the data are being collected either in the laboratory (48.2%) or in the medical clinic/hospital (30.4%).

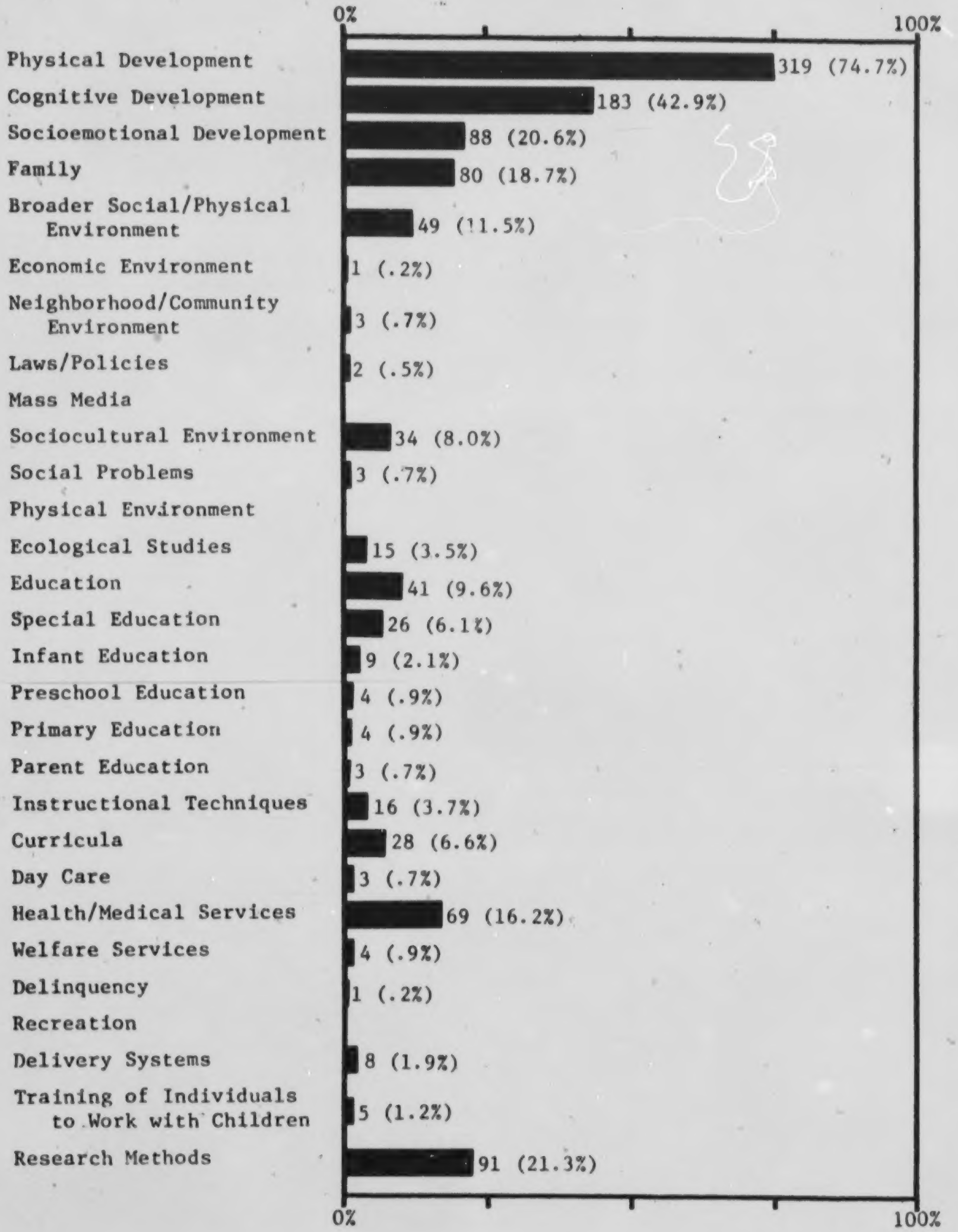
As in previous years, NICHD research concentrates on the developmental processes, particularly the physical development of the child (74.7%), and the child's cognitive development (42.9%). Within these areas the highest percentages are found in the subcategories of physical disease (46.4%), pregnancy and childbirth (35.4%), physical characteristics (31.9%), body growth (24.4%), perception (16.4%), cognitive achievement (15%), and emotional development (9.8%). Other areas of major concern are research methods (21.3%), the family (18.7%), and health/medical services (16.2%).

Plans for FY '78

NICHD indicates a continued high level of interest in cognitive development and in particular on perception, attention, thought processes, learning, language and intellectual handicaps. In addition, emphasis will be placed on research on health care for handicapped individuals and on pre- and postnatal health care. High priority target groups will include the intellectually handicapped and learning disabled, from prenatal through elementary school age. Within research on physical and socioemotional development, moderate emphasis will be put on body growth, sensorimotor development, physical disease, physical handicaps, interpersonal relationships, and attitudes.

Figure 16

Distribution of NICHD FY '77 Early Childhood Research Projects, by Area of Research (N=427)



Note. Categories are not mutually exclusive.

Table 57

Distribution of NICHD FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	256	(60.0)
Applied	158	(37.0)
Support and Utilization	6	(1.4)
Social Accounting	3	(.7)
Evaluation	2	(.5)
Policy	1	(.2)
Demonstrations	1	(.2)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects.)

Table 58

Distribution of NICHD FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	367	(85.9)
Non-Competitive	228	(53.4)
Competitive	85	(19.9)
Contract	43	(10.1)
Competitive	23	(5.4)
Intramural	16	(3.7)
Agreement	1	(.2)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects).

Table 59

Distribution of NICHD FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Laboratory	206	(48.2)
Medical Clinic/Hospital	130	(30.4)
Home	37	(8.7)
Classroom	31	(7.3)
Residential Institution	8	(1.9)
Group Care Facility	7	(1.6)
Community Center	1	(.2)
Place of Employment	1	(.2)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 93 (21.8%) of the NICHD early childhood projects, for which information on location of research was not available.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects).

Table 60

Distribution of NICHD FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Infancy	216	(50.6)
One to Three Years	85	(19.9)
Five to Ten Years	84	(19.7)
Three to Four Years	82	(19.2)
Prenatal	66	(15.5)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 144(33.7%) of the NICHD early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects).

Table 61

Breakdown of NICHD FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Children at Risk	138	(32.3)
Premature	31	(7.3)
Physically Ill	132	(30.9)
Intellectually Handicapped	120	(28.1)
Mentally Retarded	110	(25.8)
Learning Disabled	17	(4.0)
Physically Handicapped	56	(13.1)
Neurologically Handicapped	31	(7.3)
Aurally Handicapped	9	(2.1)
Speech Handicapped	7	(1.6)
Visually Handicapped	3	(.7)
Orthopedically Handicapped	3	(.7)
Emotionally Ill	16	(3.7)
Abused/Neglected	6	(1.4)
Academically Slow	2	(.5)
Delinquent	2	(.5)
Gifted	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects).

Table 62

Breakdown of NICHD FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	319	(74.7)
Physical Disease	198	(46.4)
Pregnancy and Childbirth	151	(35.4)
Physical Characteristics	136	(31.9)
Body Growth	104	(24.4)
Physical Handicaps	69	(16.2)
Genetics	57	(13.3)
Pharmacology	35	(8.2)
Motor Development	34	(8.0)
Sensory Processes	33	(7.7)
Nutrition	31	(7.3)
Epidemiology	22	(5.2)
Physical Factors relating to Education	5	(1.2)
Accidents	3	(.7)
Environmental Hazards to Health	3	(.7)
Drug Abuse	2	(.5)
Child Abuse	1	(.2)
Alcohol Abuse	1	(.2)

Table 62 (Continued)

Breakdown of NICHD FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	183	(42.9)
Perception	70	(16.4)
Cognitive Achievement	64	(15.0)
Language Development	63	(14.8)
Learning Processes	48	(11.2)
Memory	41	(9.6)
Intellectual Handicaps	40	(9.4)
Attention	25	(5.9)
Problem Solving	21	(4.9)
Concept Formation	19	(4.4)
Cognitive Factors relating to Education	15	(3.5)
Sleep/Dreaming	14	(3.3)
Reading Processes	11	(2.6)
Play	8	(1.9)
Imagery	1	(.2)
Total Research on Socioemotional Development	88	(20.6)
Emotional Development	42	(9.8)
Personality	37	(8.7)
Interpersonal Relationships	24	(5.6)
Motivation	19	(4.4)
Attitudes	12	(2.8)
Socioemotional Factors relating to Education	8	(1.9)
Perception of Self	7	(1.6)
Development of Values/Morals	7	(1.6)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects).

Table 63

Breakdown of NICHD FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	80	(18.7)
Parent-Child Relationships	40	(9.4)
Family Health	25	(5.9)
Parental Behavior/Roles	17	(4.0)
Physical Environment of Home	13	(3.0)
Family Structure	11	(2.6)
Child Rearing	8	(1.9)
Family/Society Interface	6	(1.4)
Sibling Relationships	3	(.7)
Working Mother	3	(.7)
Child Care Arrangements	2	(.5)
Impact of Family on Education	2	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '77 early childhood research (427 projects).

National Institute of Mental Health
Alcohol, Drug Abuse, and Mental Health Administration, DHEW

- FY '77 Funding of Early Childhood Research: $13.2 million
- Number of Early Childhood Research Projects Active in FY '77: 349
- Mission and/or Functions in Early Childhood Research:

The objectives of the research program of NIMH are to provide support of research on the etiology, diagnosis, treatment, prevention and control of mental illness, and the promotion of mental health. NIMH is primarily responsible, therefore, for the support of applied, clinical and basic research aimed either at the resolution of specific problems of mental and emotional illness, or at the augmenting of knowledge regarding the parameters of human behavior--including its prediction and control. Areas of investigation are varied, spanning a continnum from the investigation of basic cognitive, personality and socialization processes, through the development of research methodologies, to the study of intervention programs and other environmental influences which may affect the healthy emotional and cognitive growth of all children and may prevent or ameliorate maladaptive behaviors and socioemotional disorders of functioning. New activities and priorities include:

1. Establishment of a clinical infant project and the planned creation of a National Center for Clinical Infant Programs; the Institute is committed to expanding knowledge in the psychosocial dimensions of infant development and parent-infant relationships.
2. Intramural research into the neurobiological processes of childhood behavior disorders.
3. Special intramural and extramural efforts are newly launched to investigate depressive states and their equivalents in children as well as following the children of adults hospitalized for affective illness.

Description of FY '77 Early Childhood Activity

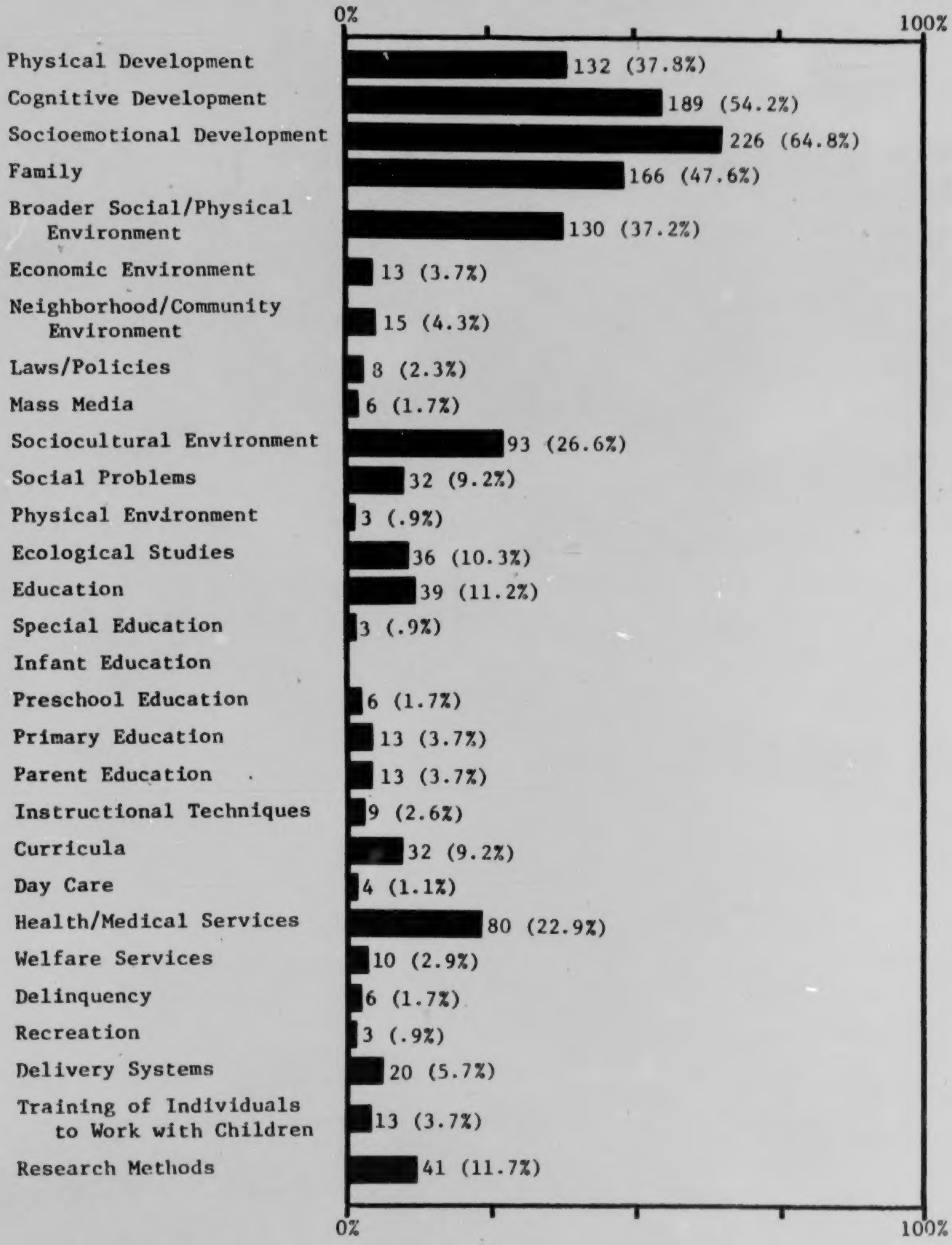
NIMH supports a wide range of research projects related to the mental health of children. Sixty-five percent of the research investigates the socioemotional development of the child, and in particular the areas of emotional development (45%), interpersonal relationships (24%) and attitudes (21%). The mental health of the child as a family member is another research area which receives substantial support from NIMH. Family research (48%) includes investigations of parent-child relationships (24%), family health issues (18%) (especially mental illness), and parental behavior (14%). In addition to research on children in general, NIMH supports a substantial amount of research to benefit children who are emotionally ill (30%). The majority of NIMH research is categorized as basic (62%); 28% of the projects are applied, primarily in the area of the treatment, prevention and control of mental illness. Most of the NIMH research is funded through grants. The agency also supports a considerable amount of intramural research (15%). Twenty-three percent of the studies are conducted in the laboratory, while the rest are conducted in the school (16%), home (15%), and medical clinic and hospital (14%).

Plans for FY '78

The NIMH will maintain a high level of interest in socioemotional development, cognitive development, and the family. Other high priority areas are: social and cultural influences; infant, preschool and special education; mental health care services; pre- and post-natal health care; child abuse; and the global approach. Significant interest is indicated also in methodology, and research planning and dissemination. Target populations of particular interest include infants through pre-school age children, minority ethnic groups, the disadvantaged, the intellectually handicapped, and the learning disabled. Physical development, day care and many aspects of education are of moderate to low interest to NIMH.

Figure 17

Distribution of NIMH FY '77 Early Childhood Research Projects, by Area of Research (N=349)



Note. Categories are not mutually exclusive.

Table 64

Distribution of NIMH FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	217	(62.2)
Applied	97	(27.8)
Support and Utilization	13	(3.7)
Evaluation	11	(3.2)
Demonstrations	6	(1.7)
Policy	4	(1.1)
Social Accounting	1	(.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

Table 65

Distribution of NIMH FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	274	(78.5)
Non-Competitive	116	(33.2)
Competitive	93	(26.6)
Intramural	53	(15.2)
Contract	22	(6.3)
Competitive	2	(.6)
Sole Source	2	(.6)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

Table 66

Distribution of NIMH FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Laboratory	82	(23.5)
Classroom	54	(15.5)
Home	52	(14.9)
Medical Clinic/Hospital	49	(14.0)
Residential Institution	6	(1.7)
Community Center	5	(1.4)
Group Care Facility	3	(.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 148 (42.4%) of the NIMH early childhood projects, for which information on location of research was not available.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

Table 67

Distribution of NIMH FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	156	(44.7)
Three to Four Years	99	(28.4)
Infancy	74	(21.2)
One to Three Years	60	(17.2)
Prenatal	17	(4.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 124 (35.5%) of the NIMH early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

Table 68

Breakdown of NIMH FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Emotionally Ill	103	(29.5)
Physically Handicapped	50	(14.3)
Neurologically Handicapped	35	(10.0)
Speech Handicapped	6	(1.7)
Orthopedically Handicapped	5	(1.4)
Visually Handicapped	3	(.9)
Aurally Handicapped	2	(.6)
Children at Risk	31	(8.9)
Intellectually Handicapped	28	(8.0)
Mentally Retarded	18	(5.2)
Learning Disabled	7	(2.0)
Delinquent	15	(4.3)
Physically Ill	12	(3.4)
Abused/Neglected	10	(2.9)
Bilingual	5	(1.4)
Academically Slow	1	(.3)
Educationally Disadvantaged	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

Table 69

Breakdown of NIMH FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	132	(37.8)
Pharmacology	32	(9.2)
Motor Development	25	(7.2)
Physical Characteristics	25	(7.2)
Physical Handicaps	24	(6.9)
Genetics	23	(6.6)
Pregnancy and Childbirth	23	(6.6)
Sensory Processes	21	(6.0)
Physical Disease	20	(5.7)
Body Growth	15	(4.3)
Physical Factors relating to Education	6	(1.7)
Epidemiology	6	(1.7)
Nutrition	5	(1.4)
Child Abuse	5	(1.4)
Accidents	2	(.6)
Environmental Hazards to Health	2	(.6)
Drug Abuse	1	(.3)

Table 69 (Continued)

Breakdown of NIMH FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	189	(54.2)
Cognitive Achievement	91	(26.1)
Language Development	69	(19.8)
Perception	60	(17.2)
Learning	49	(14.0)
Memory	35	(10.0)
Attention	30	(8.6)
Problem Solving	26	(7.4)
Cognitive Factors relating to Education	23	(6.6)
Concept Formation	18	(5.2)
Intellectual Handicaps	14	(4.0)
Play	14	(4.0)
Reading	11	(3.2)
Computer Simulation of Thought	5	(1.4)
Imagery	4	(1.1)
Creativity	1	(.3)
Sleep/Dreaming	1	(.3)
Total Research on Socioemotional Development	226	(64.8)
Emotional Development	156	(44.7)
Interpersonal Relationships	83	(23.8)
Attitudes	72	(20.6)
Personality	66	(18.9)
Perception of Self	58	(16.6)
Motivation	30	(8.6)
Development of Values/Morals	25	(7.2)
Socioemotional Factors relating to Education	24	(6.9)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

Table 70

Breakdown of NIMH FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	166	(47.6)
Parent-Child Relationships	84	(24.1)
Family Health	64	(18.3)
Family Mental Illness	50	(14.3)
Family Physical Illness	8	(2.3)
Family Health Practices	4	(1.1)
Parental Behavior/Roles	50	(14.3)
Family Structure	47	(13.5)
Child Rearing	31	(8.9)
Family/Society Interface	31	(8.9)
Physical Environment of Home	15	(4.3)
Working Mother	7	(2.0)
Impact of Family on Education	7	(2.0)
Sibling Relationships	6	(1.7)
Child Care Arrangements	5	(1.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '77 early childhood research (349 projects).

National Institute of Neurological and Communicative Disorders and Stroke
National Institutes of Health, DHEW

- FY '77 Funding of Early Childhood Research: $11.7 million
- Number of Early Childhood Research Projects Active in FY '77: 106
- Mission and/or Functions in Early Childhood Research:

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) acknowledges a special mission to further both basic and applied research in the neurological and communicative disorders relating to early childhood. Because neurological integrity is so important to quality of life and capability for independent functioning, and because disorders in the young child can produce life-long disability and loss of independence, the impact of childhood neurological and communicative disorders is enormous both in individual and societal terms.

NINCDS has identified the following high priority research issues relevant to early childhood:

1. Neurological developmental abnormalities.
    a. Cerebral palsy and motor disorders.
    b. Mental retardation.
    c. Epilepsy and other paroxysmal disorders. Experimental and clinical studies, including specific efforts with respect to absence seizures, infantile spasms, and febrile seizures and their sequelae and treatment.
    d. Autism, neurologic aspects.
    e. Learning disorders. Plasticity studies, including material relevant to critical periods of deprivation syndromes, and neurological aspects of "minimal cerebral dysfunction" and learning disability.

2. Communicative disorders.
    a. Auditory disorders in children, including procedures for early identification of congenital deafness, detection and treatment of disorders such as serous otitis media, and prevention of permanent hearing impairment as a result of disease or noise exposure.
    b. Aids for the communicatively handicapped. Development of improved sensory aids, etc., accompanied by assessment of costs and benefits of prototype aids.
    c. Impaired speech and/or language development. Improved detection, assessment and treatment of speech and language impairment in preschool children, including those who may also be minimally brain damaged, mentally retarded, autistic, hearing impaired, etc., but emphasizing particularly children who are primarily impaired in language development without other difficulties.

3. Congenital malformations and metabolic, degenerative, and nutritional disorders of brain, nerve, and muscle as they affect children, e.g., sphingolipidoes, muscular dystrophies, mucopolysaccharid disorders. Basic and clinical studies involving biochemistry, enzymology, morphology, genetic mechanism, and therapy.

4. Traumatic, vascular and asphyxial disorders producing neurological disability in children.

5. Viral and other infections of the developing nervous system, including slow viruses.

6. Cerebral neoplasms in children, incidence and prevalence studies.

7. The Collaborative Perinatal Project. This prospective, long-term investigation of approximately 58,000 women during their pregnancies, and the subsequent development (through age 7 or 9) of the children born of these pregnancies, has completed its data collection phase. On-going data analysis and interpretation will provide extensive information concerning many of the areas listed above. Study data are being analyzed in ten primary topics: cerebral palsy, mental retardation, communicative disorders, visual abnormality, convulsive disorders, learning disorders, minimal brain dysfunction, congenital malformations, birth-weight-gestational age relationships, and neuropathology, general pathology and placentology.

Description of FY '77 Early Childhood Activity

The major concern of NINCDS FY '77 research is physical development (89%), and in particular physical disease (53%), physical handicaps (46%) and physical characteristics (40%). A large proportion of the agency's research focuses on cognitive development (39%), especially perception (25%) and language development (22%). NINCDS projects are almost entirely applied (52%) and basic (42%) research, and most are being carried out in laboratory and hospital settings. The age groups studied most frequently are infancy (34%) and the ages five to ten (34%). Physically handicapped children are included in the target groups of 77% of the projects. Most of these children have neurological handicaps, although many have hearing and speech disorders. The agency funds its research primarily through grants (62%), but also supports a number of intramural projects (22%).

Plans for FY '78

In keeping with the agency emphasis on research on neurological and communicative disorders, NINCDS will maintain a high level of interest in physical and cognitive development, and health care services (particularly physical health, handicapping conditions, and pre- and post-natal care). Target populations of special interest include minority ethnic groups, the learning disabled, the physically and intellectually handicapped, and the entire age span of childhood.

Strong research interest is also indicated in methodology, dissemination and utilization of findings, and information systems.

Table 71

Breakdown of NINCDS FY '77 Early Childhood
Research Projects on Children with Special Characteristics

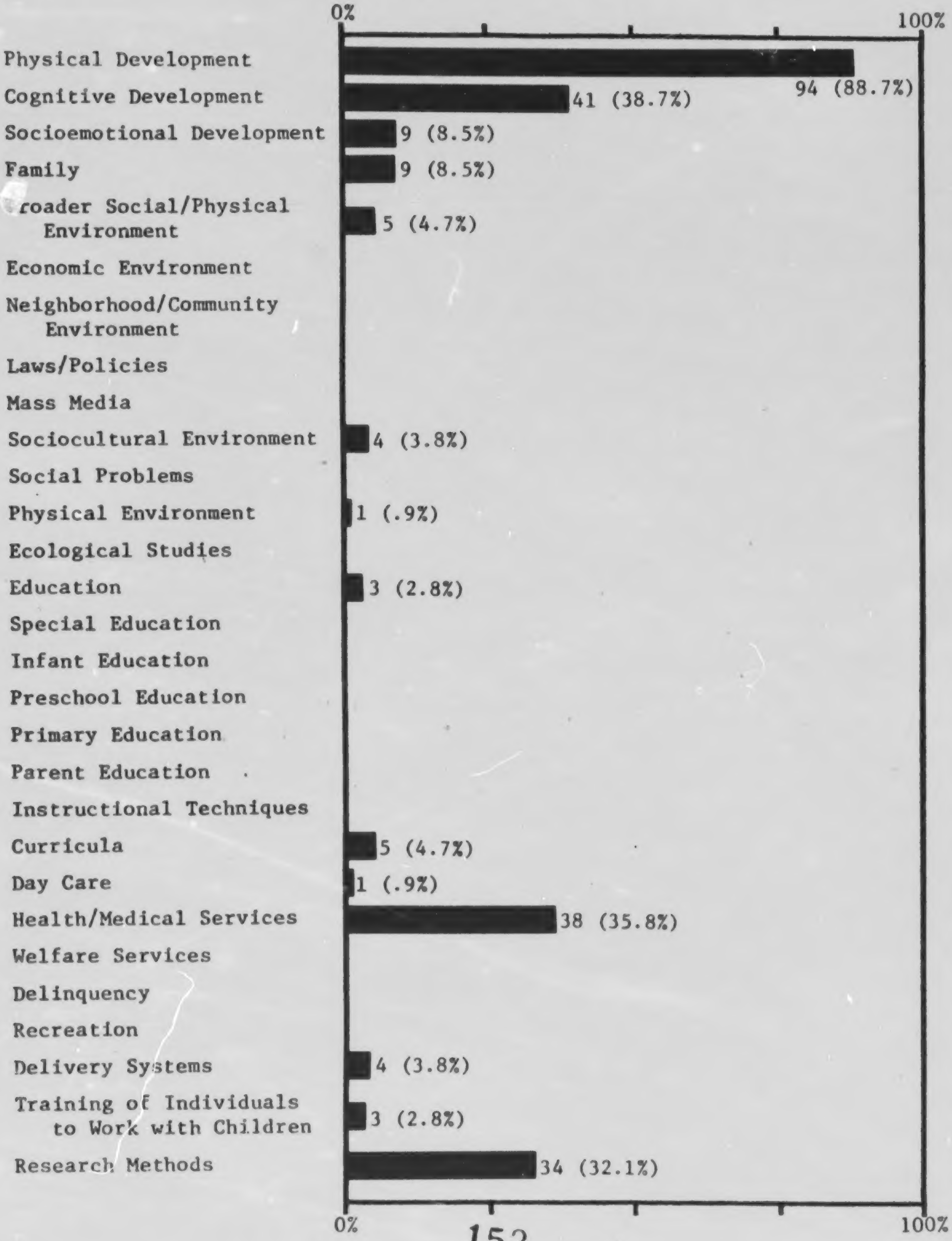
Category	No.	%[a]
Physically Handicapped	82	(77.4)
Neurologically Handicapped	59	(55.7)
Aurally Handicapped	18	(17.0)
Speech Handicapped	11	(10.4)
Visually Handicapped	2	(1.9)
Intellectually Handicapped	18	(17.0)
Mentally Retarded	11	(10.4)
Learning Disabled	5	(4.7)
Physically Ill	17	(16.0)
Children at Risk	13	(12.3)
Premature	4	(3.8)
Emotionally Ill	2	(1.9)
Academically Slow	1	(.9)
Bilingual	1	(.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NINCDS FY '77 early childhood research (106 projects).

Figure 18

Distribution of NINCDS FY '77 Early Childhood Research Projects, by Area of Research (N=106)



Note. Categories are not mutually exclusive.

Table 72

Distribution of NINCDS FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	56	(52.8)
Basic	44	(41.5)
Evaluation	5	(4.7)
Social Accounting	1	(.9)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NINCDS FY '77 early childhood research (106 projects).

Table 73

Distribution of NINCDS FY '77 Early Childhood Research Projects, by Type of Funding Arrangements

Type of Funding Arrangement	No.	%[a]
Grant	66	(62.3)
Non-Competitive	47	(44.3)
Competitive	14	(13.2)
Intramural	23	(21.7)
Contract	16	(15.1)
Competitive	10	(9.4)
Agreement	1	(.9)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NINCDS FY '77 early childhood research (106 projects).

Table 74

Distribution of NINCDS FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Laboratory	83	(78.3)
Medical Clinic/Hospital	26	(24.5)
Classroom	1	(.9)
Home	1	(.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 9(8.5%) of the NINCDS early childhood projects, for which information on location of research was not available.

[a] Percentage of total NINCDS FY '77 early childhood research (106 projects).

Table 75

Distribution of NINCDS FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	36	(34.0)
Infancy	36	(34.0)
Three to Four Years	22	(20.8)
One to Three Years	15	(14.2)
Prenatal	9	(8.5)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 49(46.2%) of the NINCDS early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NINCDS FY '77 early childhood research (106 projects).

Table 76

Breakdown of NINCDS FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	94	(88.7)
Physical Disease	56	(52.8)
Physical Handicaps	49	(46.2)
Physical Characteristics	42	(39.6)
Sensory Processes	30	(28.3)
Pharmacology	22	(20.8)
Body Growth	20	(18.9)
Motor Development	17	(16.0)
Pregnancy and Childbirth	16	(15.1)
Genetics	14	(13.2)
Epidemiology	6	(5.7)
Nutrition	4	(3.8)
Accidents	2	(1.9)
Total Research on Cognitive Development	41	(38.7)
Perception	26	(24.5)
Language Development	23	(21.7)
Cognitive Achievement	15	(14.2)
Intellectual Handicaps	9	(8.5)
Memory	7	(6.6)
Learning	4	(3.8)
Reading	2	(1.9)
Concept Formation	2	(1.9)
Attention	2	(1.9)
Problem Solving	1	(.9)
Computer Simulation	1	(.9)
Total Research on Socioemotional Development	9	(8.5)
Emotional Development	6	(5.7)
Perception of Self	3	(2.8)
Personality	3	(2.8)
Attitudes	1	(.9)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NINCDS FY '77 early childhood research (106 projects).

National Institute on Alcohol Abuse and Alcoholism
Alcohol, Drug Abuse, and Mental Health Administration, DHEW

- FY '77 Funding of Early Childhood Research: $1.9 million
- Number of Early Childhood Research Projects Active in FY '77: 15
- Mission and/or Functions in Early Childhood Research:

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) has two principal objectives: (1) to make treatment and rehabilitative services available to alcoholic people and problem drinkers by mobilizing existing resources at the Federal, state and local level and by developing a broad range of community alcoholism treatment and rehabiliative programs; (2) to pursue new methods for preventing the abuse and misuse of alcoholic beverages and the testing and evaluating of the effectiveness of these methods.

Within the Division of Prevention, research includes investigations of the impact of a wide variety of factors--social, psychological, physical, economic, legal and educational--upon people's drinking patterns. In addition, studies on the etiologies of alcoholism hope to clarify the different roles that culture, health, and quality of life play in the development of this illness. Youth have been identified as the primary target group in many of these studies. One important program direction within this division is through the Youth Education Branch. This section supports demonstration projects designed to encourage responsibility in the use of alcohol and develops and tests new youth programs for alcohol education. A second interest, channeled through the Community Prevention Branch, has as its goal the development of effective health education programs relating to alcohol abuse for the whole community population, which also include youth.

Description of FY '77 Early Childhood Activity

Much of NIAAA activity is concentrated in the areas of health and medical services (73%) and education (53%), reflecting the agency's focus on treatment and prevention. Heavy support of the development of alcohol abuse curricula (67%) is consistent with this effort. The majority of these projects are categorized as demonstrations (67%) of new intervention techniques. All of the research projects are supported by grants (100%). Sixty percent of these programs are being carried out at medical clinics and hospitals, and over half of the early childhood research is aimed at children between the ages of five and ten. Socioemotional development is examined in over half of the research projects, especially the areas of attitudes (40%) and emotional development (40%). Research on physical development (40%)

focuses on the effects of alcohol during pregnancy and childbirth (20%) on the child, and on body growth (20%), while family-centered research (67%) investigates alcohol use, its relationship to family health (40%), and its effect on parent-child relationships (20%).

Plans for FY '78

In addition to NIAAA's general focus on the study of alcohol use and abuse, there will be an increased emphasis on fetal and neonatal health and nutrition in FY '78.

Table 77

Distribution of NIAAA FY '77
Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Demonstrations	10	(66.7)
Basic	3	(20.0)
Applied	2	(13.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '77 early childhood research (15 projects).

Table 78

Distribution of NIAAA FY '77 Early Childhood
Research Projects, by Type of Funding Arrangement

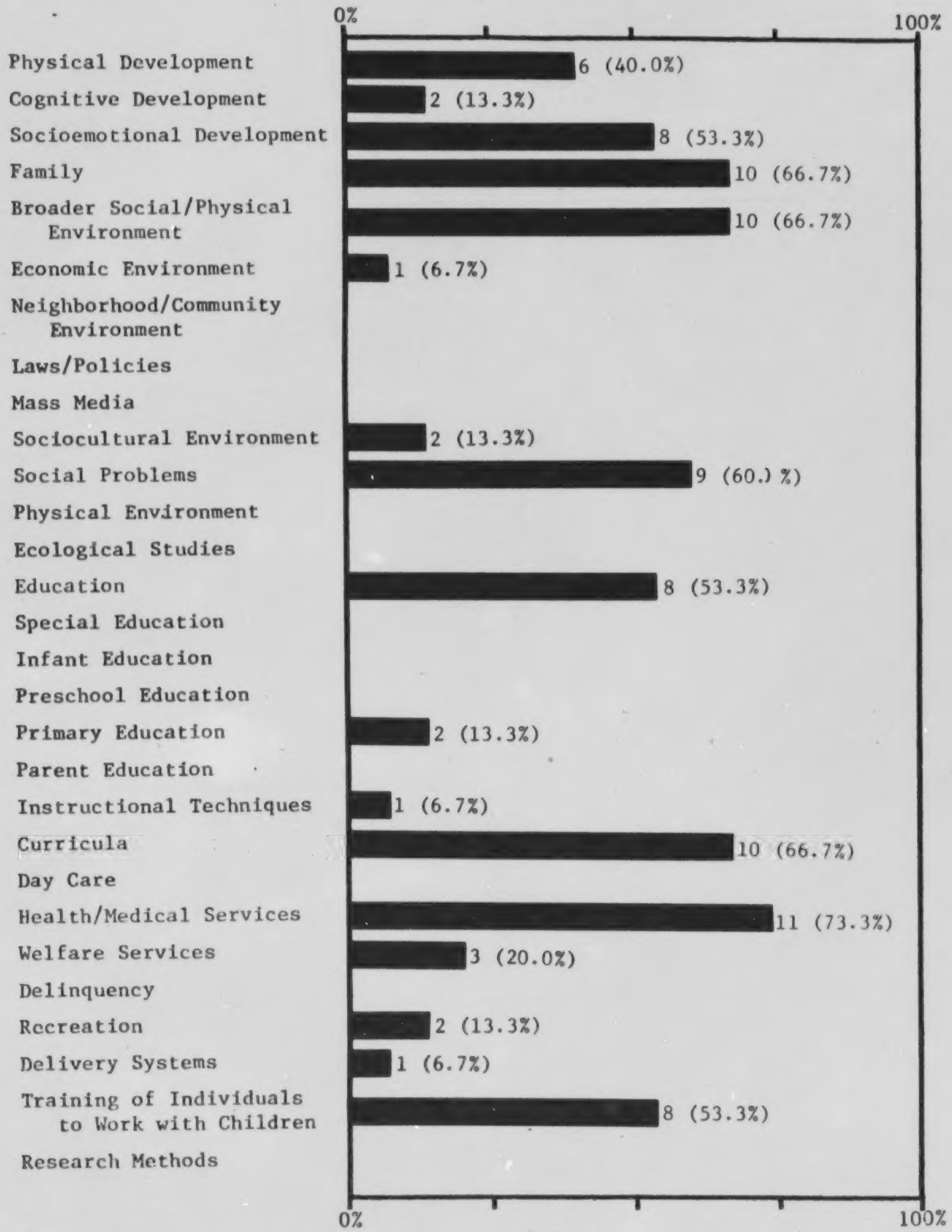
Type of Funding Arrangement	No.	%[a]
Grant	15	(100)
Non-Competitive	12	(80.0)
Competitive	3	(20.0)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '77 early childhood research (15 projects).

Figure 19

Distribution of NIAAA FY '77 Early Childhood Research Projects, by Area of Research (N=15)



Note. Categories are not mutually exclusive.

Table 79

Distribution of NIAAA FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Medical Clinic/Hospital	9	(60.0)
Classroom	2	(13.3)
Home	2	(13.3)
Residential Institution	2	(13.3)
Community Center	1	(6.7)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 4(26.7%) of the NIAAA early childhood projects, for which information on location of research was not available.

[a] Percentage of total NIAAA FY '77 early childhood research (15 projects).

Table 80

Distribution of NIAAA FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	8	(53.3)
Infancy	3	(20.0)
Prenatal	3	(20.0)
Three to Four Years	2	(13.3)
One to Three Years	2	(13.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 7(46.7%) of the NIAAA early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NIAAA FY '77 early childhood research (15 projects).

Table 81

Breakdown of NIAAA FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	6	(40.0)
Alcohol Abuse	5	(33.3)
Pregnancy and Childbirth	3	(20.0)
Body Growth	3	(20.0)
Nutrition	2	(13.3)
Motor Development	1	(6.7)
Child Abuse	1	(6.7)
Drug Abuse	1	(6.7)
Physical Factors relating to Education	1	(6.7)
Total Research on Cognitive Development	2	(13.3)
Cognitive Achievement	2	(13.3)
Intellectual Handicaps	1	(6.7)
Total Research on Socioemotional Development	8	(53.3)
Attitudes	6	(40.0)
Emotional Development	6	(40.0)
Perception of Self	3	(20.0)
Interpersonal Relationships	1	(6.7)
Socioemotional Factors relating to Education	1	(6.7)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NIAAA FY '77 early childhood research (15 projects).

Table 82

Breakdown of NIAAA FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	10	(66.7)
Family Health	6	(40.0)
Parent-Child Relationships	3	(20.0)
Parental Behavior/Roles	2	(13.3)
Family/Society Interface	2	(13.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '77 early childhood research (15 projects).

National Institute on Drug Abuse
Alcohol, Drug Abuse and Mental Health Administraion, DHEW

- FY '77 Funding of Early Childhood Research: $3.6 million
- Number of Early Childhood Research Projects in FY '77: 45
- Mission and/or Functions in Early Childhood Research:

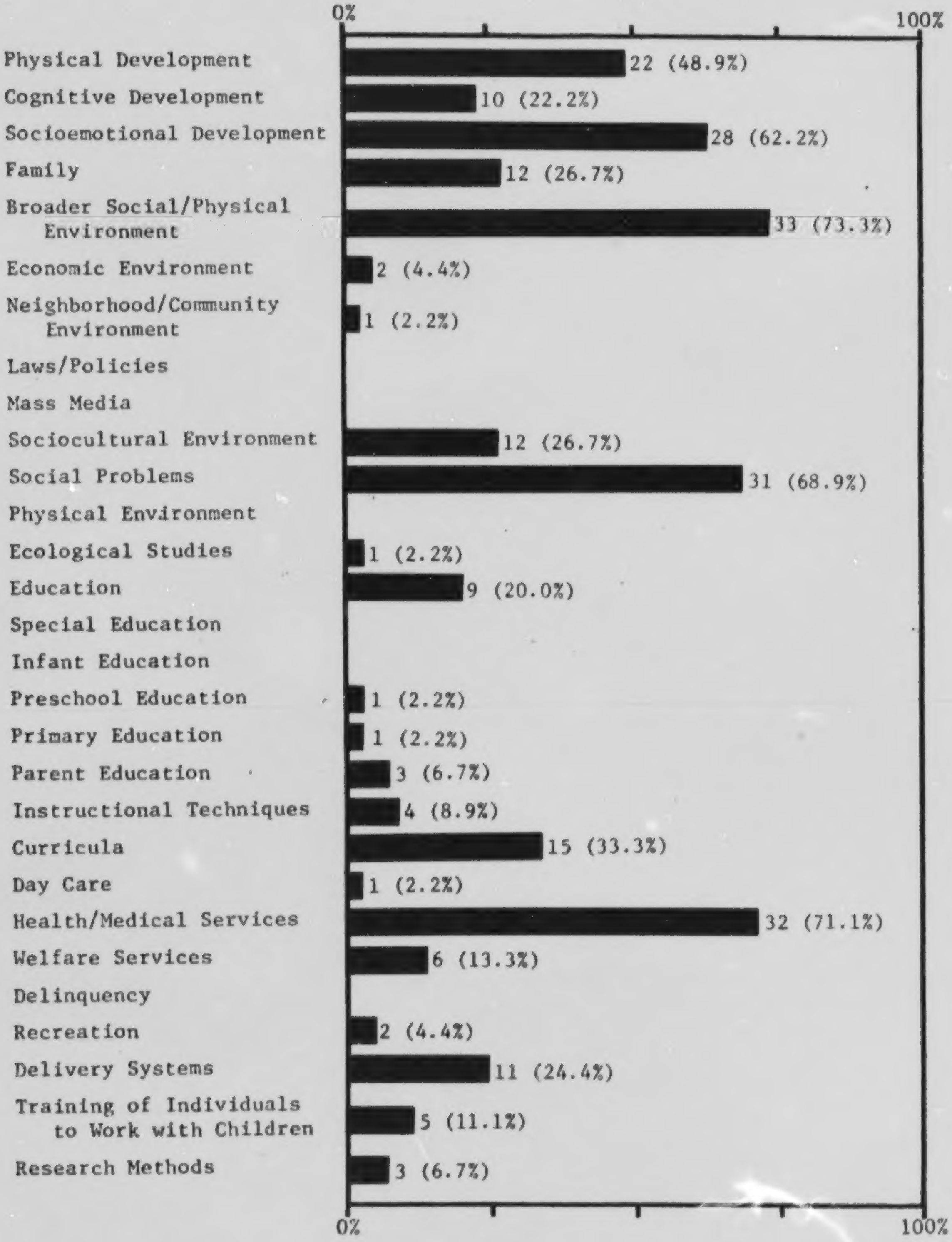
The mission of the National Institue on Drug Abuse is to support research and demonstration projects investigating the nature and extent of drug use problems, comparing various treatment methods, and improving the efficiency of treatment for the young drug user. In addition, prevention and education research is supported through the expansion of model treatment and intervention ideas.

Description of FY '77 Early Childhood Activity

NIDA research focuses primarily on the broader social environment, especially social problems (69%), and health/medical services (71%), reflecting NIDA's two-fold mission to investigate the nature of drug problems and design treatment and services to deal with them. The developmental processes also receive considerable attention. Much of the work on socioemotional development (62%) concerns the child's attitudes (42%). NIDA is also interested in the physical effects of drug abuse (49%). Thirty-eight percent of NIDA research is categorized as applied, while demonstrations of innovative treatments and services represent 27% of the total research effort. Basic research accounts for 22% of NIDA's early childhood activity. The majority of the projects are supported by grants (89%), and medical clinics and hospitals (40%) are the most common locations for NIDA research projects. Infants (24%) and children between the ages of five and ten (38%) are the most frequently studied age groups. The relationship between drug use and parent-child relationships (17%) represents the major emphasis of the family-focused research (26%).

Figure 20

Distribution of NIDA FY '77 Early Childhood Research Projects, by Area of Research (N=45)



Note. Categories are not mutually exclusive.

Table 83

Distribution of NIDA FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	17	(37.8)
Demonstrations	12	(26.7)
Basic	10	(22.2)
Evaluation	3	(6.7)
Social Accounting	2	(4.4)
Support and Utilization	1	(2.2)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '77 early childhood research (45 projects).

Table 84

Distribution of NIDA FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	40	(88.9)
Non-Competitive	11	(24.4)
Competitive	7	(15.6)
Contract	5	(11.1)
Competitive	2	(4.4)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '77 early childhood research (45 projects).

Table 85

Distribution of NIDA FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Medical Clinic/Hospital	18	(40.0)
Community Center	5	(11.1)
Classroom	3	(6.7)
Group Care Facility	2	(4.4)
Residential Institution	2	(4.4)
Laboratory	1	(2.2)
Home	1	(2.2)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 16(35.6%) of the NIDA early childhood projects, for which information on location of research was not available.

[a] Percentage of total NIDA FY '77 early childhood research (45 projects).

Table 86

Distribution of NIDA FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	17	(37.8)
Infancy	11	(24.4)
One to Three Years	7	(15.6)
Prenatal	7	(15.6)
Three to Four Years	6	(13.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 22(48.9%) of the NIDA early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NIDA FY '77 early childhood research (45 projects).

Table 87

Breakdown of NIDA FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	22	(48.9)
Drug Abuse	19	(42.2)
Pregnancy and Childbirth	11	(24.4)
Alcohol Abuse	4	(8.9)
Body Growth	3	(6.7)
Pharmacology	3	(6.7)
Motor Development	2	(4.4)
Nutrition	2	(4.4)
Sensory Processes	1	(2.2)
Physical Characteristics	1	(2.2)
Epidemiology	1	(2.2)
Child Abuse	1	(2.2)
Total Research on Cognitive Development	10	(22.2)
Cognitive Achievement	8	(17.8)
Language Development	1	(2.2)
Perception	1	(2.2)
Learning	1	(2.2)
Problem Solving	1	(2.2)
Total Research on Socioemotional Development	28	(62.2)
Attitudes	19	(42.2)
Emotional Development	12	(26.7)
Perception of Self	11	(24.4)
Interpersonal Relationships	8	(17.8)
Personality	7	(15.6)
Motivation	3	(6.7)
Development of Values/Morals	2	(4.4)
Socioemotional Factors relating to Education	1	(2.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NIDA FY '77 early childhood research (45 projects).

Table 88

Breakdown of NIDA FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	12	(26.7)
Parent-Child Relationships	8	(17.8)
Family Health	6	(13.3)
Family/Society Interface	5	(11.1)
Family Structure	2	(4.4)
Parental Behavior/Roles	1	(2.2)
Physical Environment of the Home	1	(2.2)
Child Care Arrangements	1	(2.2)
Impact of Family on Education	1	(2.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '77 early childhood research (45 projects).

National Center for Education Statistics
Education Division, DHEW

- FY '77 Funding of Early Childhood Research: $5.4 million
- Number of Early Childhood Research Projects Active in FY '77: 17
- Mission and/or Function in Early Childhood Research:

The National Center for Education Statistics (NCES) is the primary federal agency responsible for collecting and reporting statistics on the condition of American education, analyzing the meaning and significance of the statistics, and assisting State and local education agencies to improve and automate their statistical systems. The Education Amendments of 1976 also assigned the Center responsibility for:

- coordinating data acquisition activities of the Education Division and the Office for Civil Rights in order to eliminate excessive detail and unnecessary or redundante information requests,
- developing, implementing and operating a national vocational education data system (VEDS), and
- conducting a continuing survey of the supply and demand for education personnel.

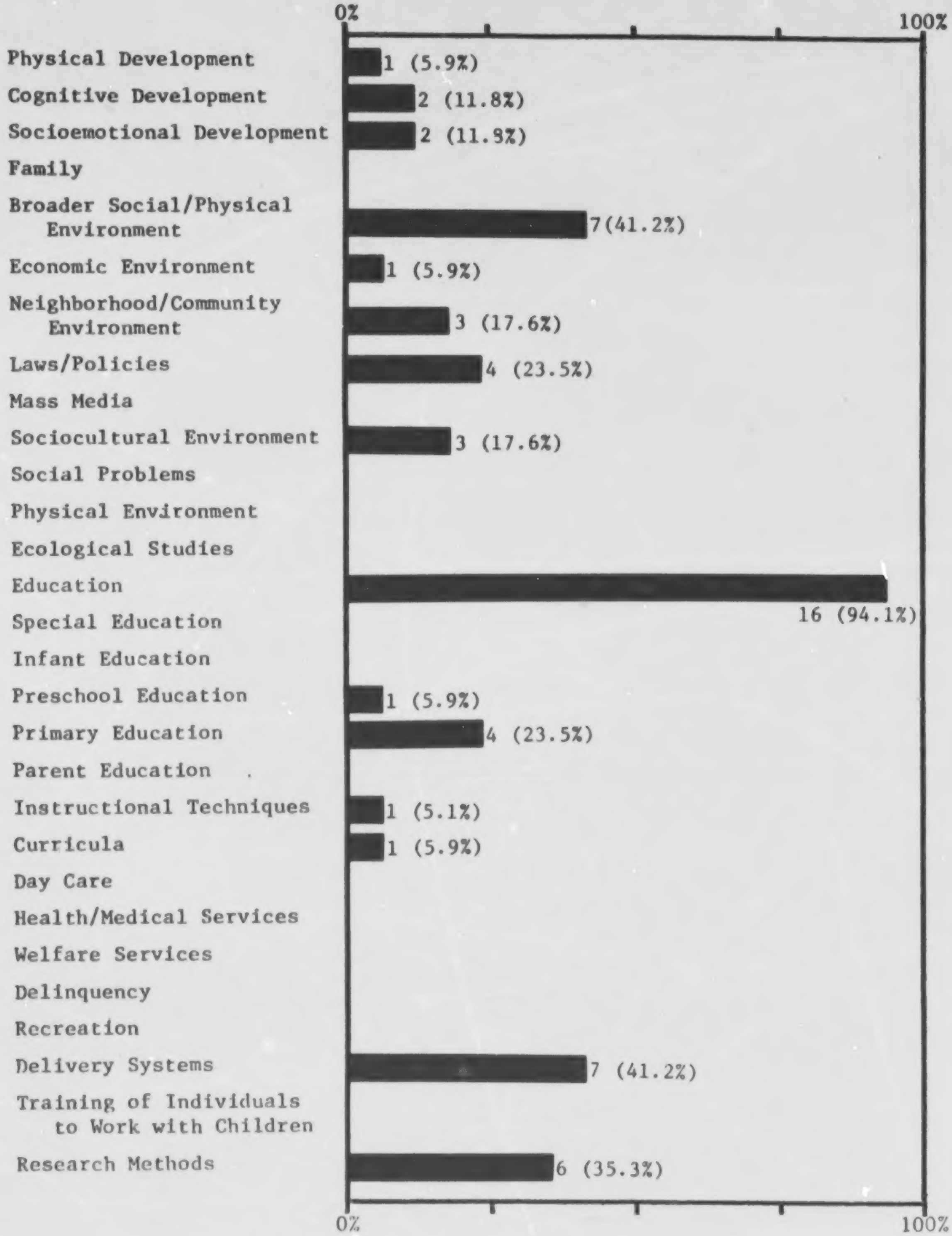
Description of FY '77 Early Childhood Activity

NCES monitors preprimary enrollment in the U.S. through the Census Bureau's Current Population Survey (CPS). The data provide the bases for regional and national estimates related to a number of socioeconomic factors: age and race of children, geographic region, metropolitan or other area, public or private school, family income and occupation and education of household head.

The NCES mission to provide statistics on the status of American Education is reflected in its support of education projects (94%) which develop new research methods (35%) and which investigate issues relating to the broader social environment (41%). The NCES emphasis on social data gathering is revealed by its substantial support of research categorized as social accounting (65%). The agency supports a large proportion of intramural research (41%).

Figure 21

Distribution of NCES FY '77 Early Childhood Research Projects, by Area of Research (N=17)



Note. Categories are not mutually exclusive.

Table 89

Distribution of NCES FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Social Accounting	11	(64.7)
Support and Utilization	4	(23.5)
Applied	1	(5.9)
Policy	1	(5.9)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NCES FY '77 early childhood research (17 projects).

Table 90

Distribution of NCES FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Intramural	9	(52.9)
Contract	7	(41.2)
Sole Source	3	(17.6)
Competitive	2	(11.8)
Grant	1	(5.9)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NCES FY' 77 early childhood research (17 projects).

Table 91

Distribution of NCES FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	8	(47.1)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 9(52.9%) of the NCES early childhood projects, for which information on location of research was not available.

[a] Percentage of total NCES FY '77 early childhood research (17 projects).

Table 92

Distribution of NCES FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	4	(23.5)
Three to Four Years	1	(5.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 13(76.5%) of the NCES early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NCES FY '77 early childhood research (17 projects).

National Institute of Education, DHEW

- FY '77 Funding of Early Childhood Research: $39.8 million
- Number of Early Childhood Research Projects Active in FY '77: 338
- Mission and/or Function in Early Childhood Research:

The National Institute of Education has been mandated by Congress to conduct, collect, and disseminate educational research, to train educational researchers, and to assist in effecting these tasks through sponsorship of grants, contracts, and technical assistance. The NIE has, as its goal, the amelioration of the problems of American children through education, the advancement of the practice of education as an art, as a science, as a profession, and the strengthening of the scientific foundations of education through the construction of an effective research and development system.

Early childhood research is not a separate priority of NIE. Instead, research in early childhood is undertaken primarily insofar as it relates to the following priority, goal-oriented activities:

Dissemination and Resources - Improving dissemination and application of the results of educational research and development, and building an effective R&D system.

Educational Equity - Improving school's abilities to provide equal educational opportunity for populations whose opportunities have been limited because of their racial, ethnic, or language background, sex, or socioeconomic status.

Education and Work - Improving the ability of the education system to prepare youths and adults for entering and progressing in careers.

School Capacity for Problem Solving - Improving the capability of schools and school systems to diagnose their own problems and to design solutions.

Basic Skills - Improving student performance in such essential skills as reading and mathematics.

Finance and Productivity - Improving the ability of educational institutions to provide high quality education under conditions of declining enrollment, rising costs, and increased competition for funds.

Note. The mission statement shown above was taken from the annual report published in February, 1977, since a revised statement could not be obtained at the time this report was being prepared. Therefore this statement may not present the most accurate description of the current NIE mission in early childhood research.

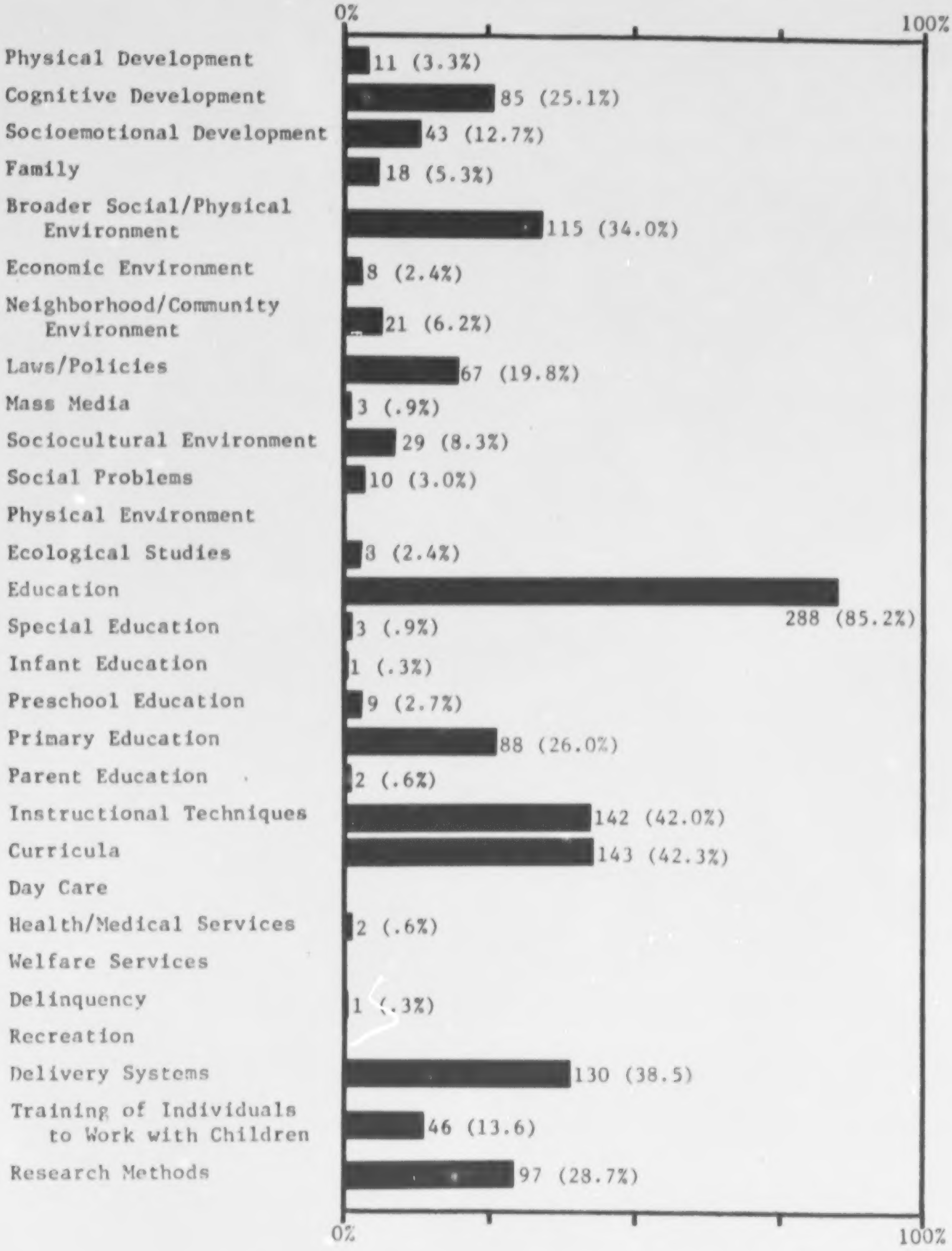
Description of FY '77 Early Childhood Activity

The primary concern of NIE research to improve the education of children is reflected in the concentration of support in the education categories (85%). The development of innovative instructional techniques (42%) and curricula (42%) are part of this agency interest. NIE supports both applied (40%) and basic (12%) research projects which lead toward the improvement of the quality of education. The majority of NIE research is funded through contracts (62%), with 38% funded through grants.

Twenty-one percent of the projects are carried out in a classroom setting. In the area of instructional techniques, the heaviest emphasis is on the delivery of new methods of individualized instruction (12%). Language arts (15%), which includes research on reading techniques (13%), is the major focus of NIE curriculum development. One third of NIE research is directed at children between the ages of five and ten. Although most NIE projects are designed to impact children in general, there is also concern for the education of bilingual children (6%) and children who are considered to be academically slow (7%). NIE's interest in basic research on education is reflected in its support of projects which investigate cognitive factors relating to education (17%) and cognitive achievement (16%).

Figure 22

Distribution of NIE FY '77 Early Childhood Research Projects, by Area of Research (N=338)



Note. Categories are not mutually exclusive.

Table 93

Distribution of NIE FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	135	(39.9)
Support and Utilization	79	(23.4)
Policy	44	(13.0)
Basic	41	(12.1)
Evaluation	23	(6.8)
Social Accounting	9	(2.7)
Demonstrations	7	(2.1)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 94

Distribution of NIE FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Contract	211	(62.4)
Sole Source	115	(34.0)
Competitive	92	(27.2)
Grant	127	(37.6)
Competitive	91	(26.9)
Non-Competitive	34	(10.1)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 95

Distribution of NIE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	72	(21.3)
Home	6	(1.8)
Laboratory	3	(.9)
Group Care Facility	2	(.6)
Medical Clinic/Hospital	1	(.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 258(76.3%) of the NIE early childhood projects, for which information on location of research was not available.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 96

Distribution of NIE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	103	(30.5)
Three to Four Years	9	(2.7)
One to Three Years	2	(.6)
Infancy	2	(.6)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 232(68.6%) of the NIE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 97

Breakdown of NIE FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Academically Slow	23	(6.8)
Bilingual	21	(6.2)
Educationally Disadvantaged	6	(1.8)
Gifted	4	(1.2)
Physically Handicapped	2	(.6)
Intellectually Handicapped	2	(.6)
Emotionally Ill	1	(.3)
Delinquent	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 98

Breakdown of NIE FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	142	(42.0)
Individual Instruction	39	(11.5)
Bilingual Education	13	(3.8)
TV Instruction	8	(2.4)
Open Classroom	6	(1.8)
Nongraded Classes	2	(.6)
Cross Age Teaching	1	(.3)
Peer Teaching	1	(.3)
Tutorial Education	1	(.3)
Team Teaching	1	(.3)
Volunteer Service	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 99

Breakdown of NIE FY '77 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	85	(25.1)
Cognitive Factors relating to Education	58	(17.2)
Cognitive Achievement	54	(16.0)
Language Development	29	(8.6)
Reading	22	(6.5)
Learning	18	(5.3)
Problem Solving	12	(3.6)
Concept Formation	12	(3.6)
Perception	11	(3.3)
Memory	11	(3.3)
Computer Simulation of Thought	3	(.9)
Intellectual Handicaps	1	(.3)
Attention	1	(.3)
Creativity	1	(.3)
Total Research on Socioemotional Development	43	(12.7)
Attitudes	21	(6.2)
Socioemotional Attitudes relating to Education	20	(5.9)
Perception of Self	15	(4.4)
Interpersonal Relationships	11	(3.3)
Motivation	9	(2.7)
Development of Values	4	(1.2)
Emotional Development	3	(.9)
Personality	3	(.9)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NIE FY '77 early childhood research (338 projects).

Table 100

Breakdown of NIE FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	143	(42.3)
Language Arts	52	(15.4)
Reading	43	(12.7)
Math	43	(12.7)
Career Education	20	(5.9)
Vocational Education	8	(2.4)
Social Studies	8	(2.4)
Science	7	(2.1)
Cultural Awareness	5	(1.5)
Fine Arts	5	(1.5)
Physical Education	4	(1.2)
Metric Education	4	(1.2)
Health Education	3	(.9)
Environmental Education	3	(.9)
Citizenship	3	(.9)
Consumer's Education	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE 'FY '77 early childhood research (338 projects).

U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $225.1 million
- Number of Early Childhood Research Projects Active in FY '77: 1,832
- Mission and/or Function in Early Childhood Research:

The Office of Education's functions are to collect facts and statistics to show the condition and progress of education, to diffuse information to aid in the establishment and maintenance of efficient school systems and otherwise to promote the cause of education. Related functions delegated to OE include the responsibility for Federal financial assistance to education and for special studies and programs. This report will describe nine sections of OE which engage in development, demonstration and evaluation activities affecting children: the Bureau of Education for the Handicapped, the Bureau of Elementary and Secondary Education, the Office of Planning, Budgeting and Evaluation, the Right-to-Read Effort, the Office of Career Education, the Division of International Education, and the Office of Bilingual Education.

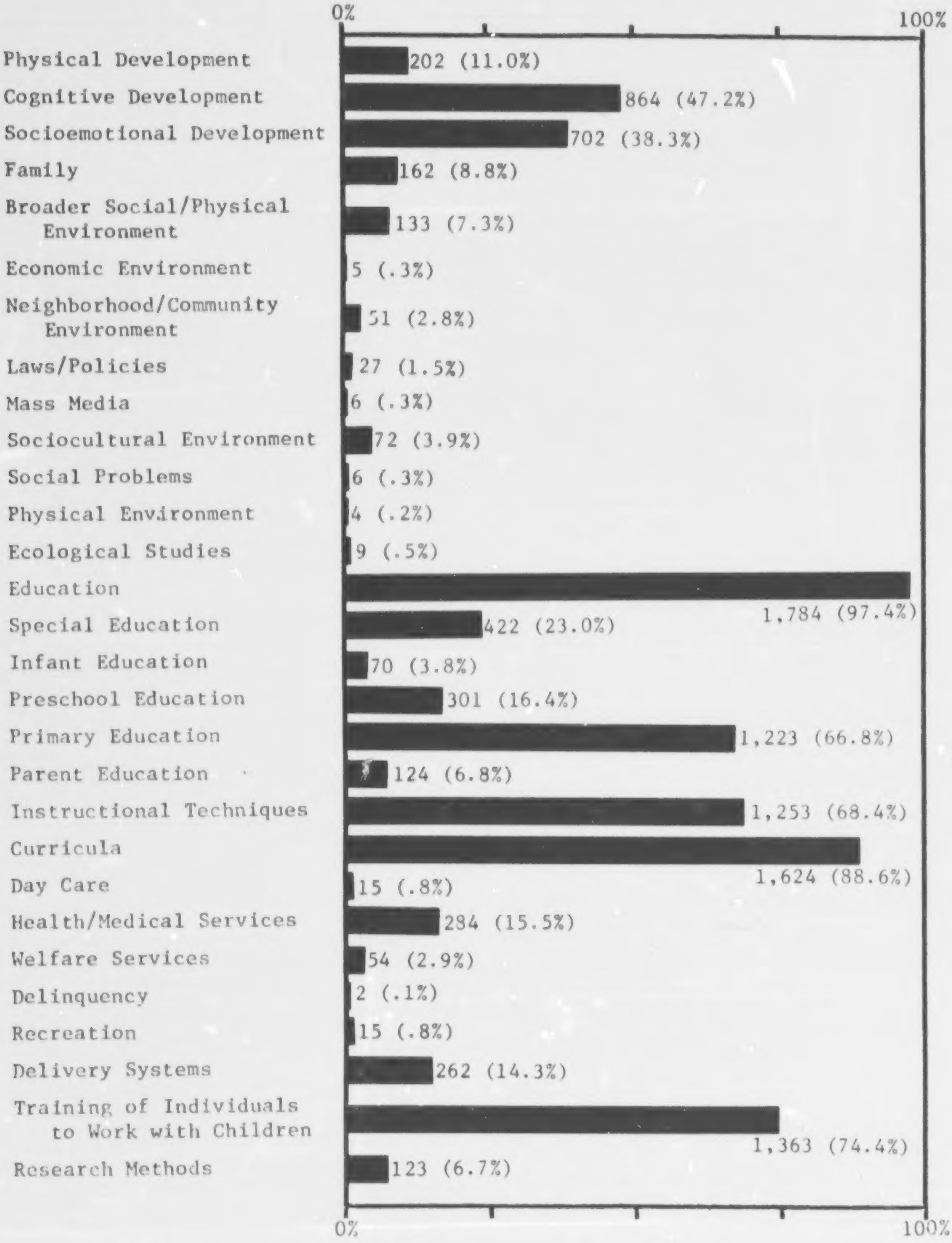
Description of FY '77 Early Childhood Activity

The Office of Education supports exactly half of the FY '77 early childhood projects (children up to ten years of age) in the Interagency Research Information System. Figure 23 shows that these projects concentrate almost exclusively on aspects of education and cognitive and socioemotional development. Table 101 presents a breakdown of early childhood projects by kind of research for OE as a whole. More than half of the projects are classified as demonstrations (60%), although a substantial amount of the activity is classified as applied research (29%). Almost all of the projects are funded through grants (92%).

The individual divisions of OE, nine of which are covered in this report, have different missions and interests, and accordingly show some differences in the kind of research they support. The Bureau of Elementary and Secondary Education, Right to Read, the Office of Indian Education, and the Office of Bilingual Education all support primarily demonstration projects (69%, 71%, 72%, 98%, respectively). The Bureau of Education for the Handicapped, the Office of Career Education, the Division of International Education, and the Bureau of Occupational and Adult Education support high proportions of applied research (59%, 67%, 84% and 48%, respectively). The Office of Planning, Budgeting, and Evaluation funds mostly evaluation projects (73%).

Figure 23

Distribution of OE FY '77 Early Childhood Research Projects, by Area of Research (N=1,832)



Note. Categories are not mutually exclusive.

Table 101

Distribution of OE FY '77
Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Demonstrations	1,097	(59.9)
Applied	524	(28.6)
Policy	70	(3.8)
Support and Utilization	65	(3.5)
Evaluation	53	(2.9)
Basic	20	(1.1)
Social Accounting	3	(.2)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OE FY '77 early childhood research (1,832 projects).

Table 102

Distribution of OE FY '77 Early Childhood
Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	1,681	(91.8)
Competitive	1,401	(76.5)
Non-Competitive	217	(11.8)
Contract	151	(8.2)
Competitive	89	(4.9)
Sole Source	10	(.5)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OE FY '77 early childhood research (1,832 projects).

Bureau of Education for the Handicapped
U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $42.3 million
- Number of Early Childhood Research Projects Active in FY '77: 438
- Mission and/or Functions in Early Childhood Research:

The mission of the Bureau of Education for the Handicapped is to insure that all handicapped children receive appropriate educational services to enable them to develop their fullest potential and thereby reduce their degree of dependency. BEH research goals at the early childhood level include: (1) improving procedures for early identification of children at risk; (2) determining ways to make preschool services more appropriate to the unique needs of handicapped children; and (3) disseminating valid identification, assessment, and intervention information to those who are responsible for the establishment and maintenance of service delivery systems.

Description of FY '77 Early Childhood Activity

As Figure 24 indicates, the primary research foci of BEH include: instruction (93%); special education (87%); curriculum development (64%); training of individuals to work with children (57%); instructional techniques (57%) and cognitive development (55%). Curriculum research is concentrated on the areas of language arts (18%) and education for parenthood (11%). Research on instructional techniques is focused primarily on individualized instruction (44%).

Table 105 shows that high proportions of the projects involve children with physical (56%) and intellectual (56%) handicaps. Within the broad category of physically handicapping conditions, aural (29%), speech (27%) and visual handicaps (26%) receive significant emphasis. The mentally retarded (38%) and learning disabled (31%) populations share the research emphasis in the intellectually handicapping category.

Research on the family is focused primarily on the areas of parent-child relationships (12%), parental behavior/roles (8%) and family health (6%).

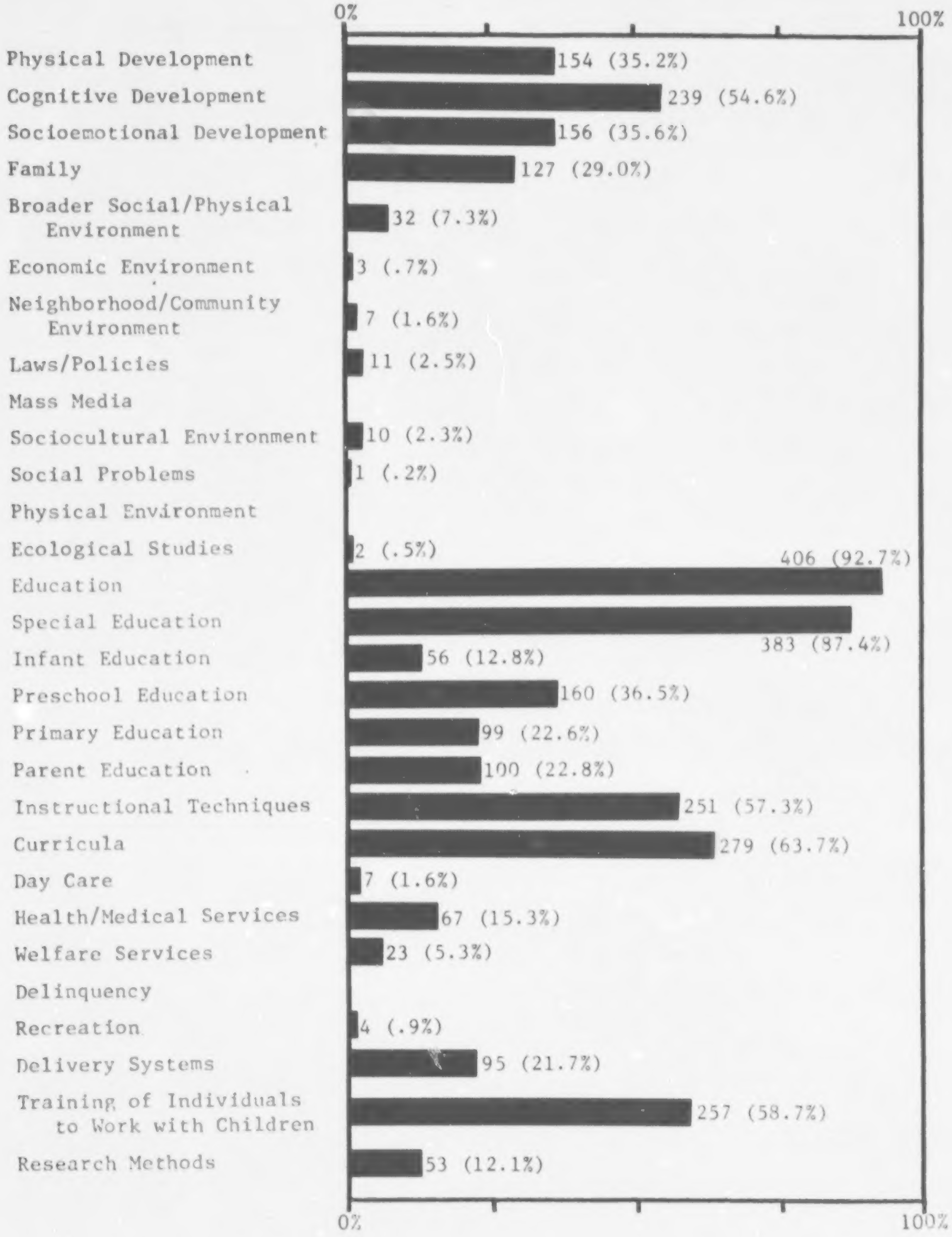
Physical, cognitive and socioemotional aspects of child development receive significant research emphasis in FY '77 projects. Motor development (18%) and physical handicaps (13%) are the areas of physical development which receive the most attention. Within the category of cognitive development, language development (27%), and cognitive achievement (17%) are factors focused on most often. In the socioemotional category, interpersonal relationships (12%), perception of self (9%), and attitudes (8%) are emphasized the most.

Plans for FY '78

In the coming fiscal year BEH will direct its research efforts toward learning processes, emotional development, parenting skills, and special education for infants, preschool and elementary school children. Primary emphasis will be placed on instructional techniques, curricula, innovative teaching methods and equipment. Medium levels of interest are indicated for bilingual instruction, basic skills, health and welfare services for the handicapped, gifted children as a target group, self-concept of the child, interpersonal relationships, environmental influences, and legal rights. Research on methodology (program evaluation, observational techniques, and comparability), planning, dissemination and information analysis will have higher priority than interagency research, conferences, state-of-the-art papers, research design, interviews, statistical techniques and longitudinal research.

Figure 24

Distribution of BEH FY '77 Early Childhood Research Projects, by Area of Research (N=438)



Note. Categories are not mutually exclusive.

Table 103

Distribution of BEH FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	214	(48.9)
Home	121	(27.6)
Medical Clinic/Hospital	39	(8.9)
Group Care Facility	36	(8.2)
Community Center	9	(2.1)
Laboratory	7	(1.6)
Residential Institution	5	(1.1)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 108(24.7%) of the BEH early childhood projects, for which information on location of research was not available.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Table 104

Distribution of BEH FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	279	(63.7)
Three to Five Years	255	(58.2)
One to Three Years	172	(39.3)
Infancy	153	(34.9)
Prenatal	4	(.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 84 (19.2%) of the BEH early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Table 105

Breakdown of BEH FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Physically Handicapped	247	(56.4)
Aurally Handicapped	128	(29.2)
Speech Handicapped	116	(26.5)
Visually Handicapped	113	(25.8)
Multihandicapped	93	(21.2)
Orthopedically Handicapped	91	(20.8)
Neurologically Handicapped	60	(13.7)
Intellectually Handicapped	246	(56.2)
Mentally Retarded	167	(38.1)
Learning Disabled	136	(31.1)
Emotionally Ill	140	(32.0)
Gifted	53	(12.1)
Children at Risk	38	(8.7)
Bilingual	23	(5.3)
Abused/Neglected	11	(2.5)
Academically Slow	4	(.9)
Physically Ill	2	(.5)
Educationally Disadvantaged	2	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Table 106

Breakdown of BEH FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	154	(35.2)
Motor Development	77	(17.6)
Physical Handicaps	57	(13.0)
Sensory Processes	30	(6.8)
Physical Factors relating to Education	25	(5.7)
Physical Characteristics	4	(.9)
Physical Disease	2	(.5)
Pregnancy and Childbirth	2	(.5)
Body Growth	2	(.5)
Nutrition	1	(.2)
Pharmacology	1	(.2)
Accidents	1	(.2)
Total Research on Cognitive Development	239	(54.6)
Language Development	118	(26.9)
Cognitive Achievement	73	(16.7)
Intellectual Handicaps	53	(12.1)
Perception	47	(10.7)
Concept Formation	26	(5.9)
Cognitive Factors relating to Education	24	(5.5)
Problem Solving	21	(4.8)
Learning	19	(4.3)
Reading	13	(3.0)
Creativity	12	(2.7)
Attention	9	(2.1)
Memory	7	(1.6)
Play	6	(1.4)
Imagery	1	(.2)
Computer Simulation of Thought	1	(.2)

Table 106 (Continued)

Breakdown of BEH FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Socioemotional Development	156	(35.6)
Interpersonal Relationships	53	(12.1)
Perception of Self	40	(9.1)
Attitudes	34	(7.8)
Emotional Development	29	(6.6)
Socioemotional Factors relating to Education	16	(3.7)
Motivation	9	(2.1)
Personality	6	(1.4)
Development of Values/Morals	2	(.5)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Table 107

Breakdown of BEH FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	127	(29.0)
Parent-Child Relationships	51	(11.6)
Parental Behavior/Roles	37	(8.4)
Family Health	28	(6.4)
Child Rearing	7	(1.6)
Sibling Relationships	7	(1.6)
Impact of Family on Education	7	(1.6)
Family Structure	6	(1.4)
Physical Environment of the Home	2	(.5)
Family/Society Interface	1	(.2)
Child Care Arrangements	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Table 108

Breakdown of BEH FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	251	(57.3)
Individualized Instruction	194	(44.3)
Tutorial Education	16	(3.7)
Team Teaching	8	(1.8)
Open Classroom	7	(1.6)
Nongraded Classes	4	(.9)
Volunteer Service	3	(.7)
Peer Teaching	2	(.5)
Cross-age Teaching	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Table 109

Breakdown of BEH FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	279	(63.7)
Language Arts	78	(17.8)
Reading	36	(8.2)
Education for Parenthood	50	(11.4)
Math	36	(8.2)
Fine Arts	17	(3.9)
Physical Education	14	(3.2)
Vocational Education	11	(2.5)
Career Education	10	(2.3)
Social Studies	8	(1.8)
Science	8	(1.8)
Cultural Awareness	7	(1.6)
Health Education	6	(1.4)
Citizenship	6	(1.4)
Environmental Education	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '77 early childhood research (438 projects).

Bureau of Elementary and Secondary Education
U.S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $61.9 million
- Number of Early Childhood Research Projects Active in FY '77: 212
- Mission and/or Functions in Early Childhood Research:

The Bureau of Elementary and Secondary Education formulates policy for, directs, and coordinates the activities and elements of the Office of Education which deal with preschool, elementary and secondary education. For the purposes of this report, six divisions are contacted: (1) The Office of Environmental Education supports the development, demonstration, and dissemination of multidisciplinary, problem-oriented environmental education programs. (2) The Division of Educational Technology supports the effective employment of technology for improvement of instruction and delivery of programs and services, and supports the development of educational television and radio programming for children and for the training of parents. (3) The Division of Follow Through supports demonstration projects which provide comprehensive services--education, nutrition, health care, and social and psychological services--designed to sustain and supplement in the primary grades the gains made by low-income children who participated in a Head Start or comparable preschool program. (4) State and Local Educational Programs strives to improve the educational services provided to students enrolled in the nation's elementary and secondary schools. These programs provide assistance to state and local education agencies through legislative resources (authorized by 15 legislative acts) and the tools developed to meet the special needs of various education agencies. (5) The Office of Drug Education, Nutrition and Health Programs sponsors training teams for drug education and technical assistance. Other major emphases include the delivery of education and other services (i.e., school lunches, nutrition supplements and health services). (6) The Office of Libraries and Learning Resources has a mandate to effect better coordination and utilization of the nation's libraries and instructional resources to enhance learning and improve information services for children, college students and adults.

Description of FY '77 Early Childhood Activity

Table 110 shows a breakdown of the FY '77 BESE early childhood projects and funding by the six BESE divisions.

The research emphases of the Bureau of Elementary and Secondary Education are indicated in Figure 25. As the figure shows, the primary emphases are on: instruction (100%); curriculum development (99%); primary education (94%); and instructional techniques (84%). In addition, training of individuals to work with children (84%), and health/medical services (78%) are areas of considerable activity. Individualized instruction is the focus of most of the research on instructional techniques (72%), while language arts (85%), math (83%) and health (69%) are the curriculum areas which receive most of the attention. The BESE early childhood target groups are drawn almost exclusively from the five to ten year age range (95%), and almost all of the projects are carried out in the school (92%).

Table 110

FY '77 BESE Early Childhood Research, by Division

Division	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Follow Through	183	(86.3)	54.0	(87.3)
Environmental Education	16	(7.5)	.9	(1.4)
Educational Technology	6	(2.8)	6.9	(11.2)
Drug Education, Nutrition, and Health Programs	3	(1.4)	-	-
Libraries and Learning Resources	2	(.9)	.07	(.1)
State and Local Educational Programs	2	(.9)	-	-

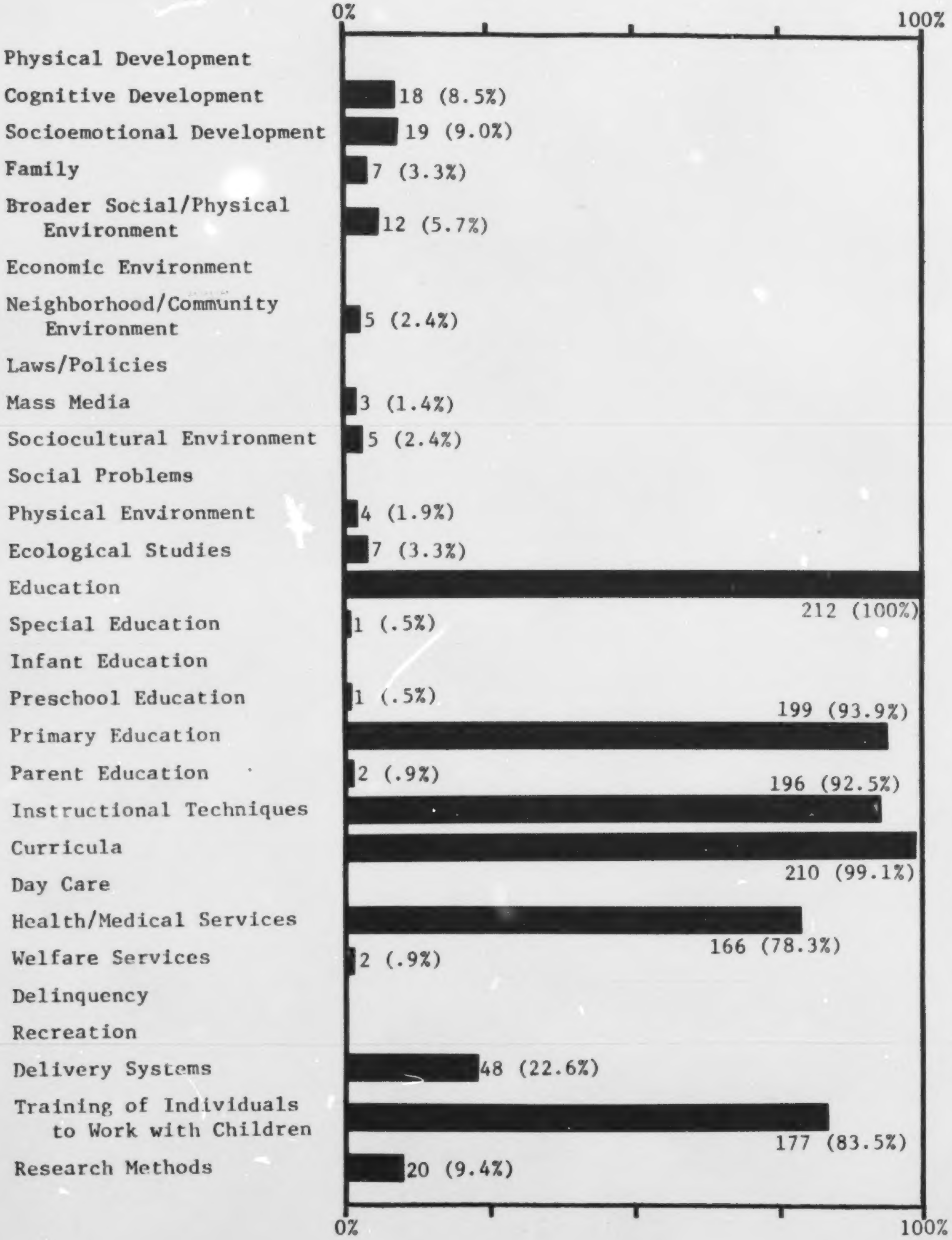
[a] Percentage of total number of BESE early childhood projects (212).

[b] In millions of dollars.

[c] Percentage of total amount of BESE early childhood funding ($61,882,242).

Figure 25

Distribution of BESE FY '77 Early Childhood Research Projects, by Area of Research (N=212)



Note. Categories are not mutually exclusive.

Table 111

Distribution of BESE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	195	(92.0)
Home	3	(1.4)
Laboratory	2	(.9)
Community Center	2	(.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 12 (5.7%) of the BESE early childhood projects, for which information on location of research was not available.

[a] Percentage of total BESE FY '77 early childhood research (212 projects).

Table 112

Breakdown of BESE FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	196	(92.0)
Individual Instruction	153	(71.8)
Tutorial Education	22	(10.3)
Team Teaching	6	(2.8)
TV Instruction	5	(2.3)
Open Classroom	3	(1.4)
Nongraded Classes	3	(1.4)
Bilingual Education	2	(.9)
Peer Teaching	1	(.5)
Volunteer Service	1	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '77 early childhood research (213 projects).

Table 113

Distribution of BESE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%^{a}
Five to Ten Years	202	(95.3)
Three to Four Years	2	(.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 11 (5.2%) of the BESE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total BESE FY '77 early childhood research (212 projects).

Table 114

Breakdown of BESE FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%^{a}
Total Research on Educational Curriculum	210	(98.6)
Language Arts	181	(85.0)
Reading	34	(16.0)
Math	177	(83.1)
Health Education	146	(68.5)
Environmental Education	16	(7.5)
Cultural Awareness	8	(3.8)
Science	8	(3.8)
Social Studies	3	(1.4)
Fine Arts	3	(1.4)
Career Education	2	(.9)
Vocational Education	1	(.5)
Education for Parenthood	1	(.5)
Citizenship	1	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '77 early childhood research (213 projects).

Bureau of Occupational and Adult Education
U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $4.3 million
- Number of Early Childhood Research Projects Active in FY '77: 138
- Mission and/or Functions in Early Childhood Research:

Section 131(a) of Part C of the Vocational Educational Amendments of 1968 (P.L. 90-576) authorizes funds for research in vocational education. The Commissioner of Education is authorized to allocate 50 percent of the research and training under Part C directly to profit and to non-profit agencies and institutions. The law authorizes funds to do research in vocational education, to sponsor training programs designed to familiarize participants with vocational education research, to establish experimental, demonstration, developmental and pilot projects, to develop new vocational education curricula and to identify opportunities requiring less than professional training in such fields as mental and physical health, crime prevention and correction, child care, and recreation.

Goals of the BOAE Center for Adult, Vocational, Technical, and Manpower Education include the improvement and expansion of vocational educational guidance, counseling, placement, and follow-up systems, the improvement and expansion of cooperative education, the increasing of sex fairness, and increasing the integration of handicapped students into vocational educational programs. The research and development program in vocational education begins at the elementary school level and includes children nine and younger as well as adolescents. Other divisions of BOAE which are reported are Metric Education and Consumers Education.

Description of FY '77 Early Childhood Activity

The research foci of the Bureau of Occupational and Adult Education are indicated in Figure 26. Instruction (99%), curricula (99%), training of individuals (62%) and primary education (53%) are the major research emphases of BOAE. Within the educational curriculum category, metric education (52%), vocational education (30%), career education (20%), and consumer education (13%) are areas of greatest emphasis. Bilingual (15%) and gifted children (11%), as well as the physically handicapped (8%), academically slow (7%), and intellectually handicapped (6%) are the special target groups involved in the highest proportions of research. Research on instructional techniques concentrates on individualized instruction (14%) and bilingual education (7%).

Plans for FY '78

BOAE indicates medium levels of interest in the areas of learning, language, intellectual and physical handicaps, attitudes, the social environment of the child, career awareness, bilingual instruction, and innovative teaching methods. Minority ethnic groups, the disadvantaged, gifted, physically handicapped, and bilingual children will have higher priority than other special target groups. Medium levels of interest are also shown for research on methodology, and planning and dissemination activities, and, in particular, program evaluation, research design, statistical techniques, methods to improve comparability, interagency research, conferences, state-of-the-art papers, and development of information systems. A whole child/global approach is also of interest to BOAE.

Table 115

Breakdown of BOAE FY '77 Early Childhood Research Projects on Educational Curriculum

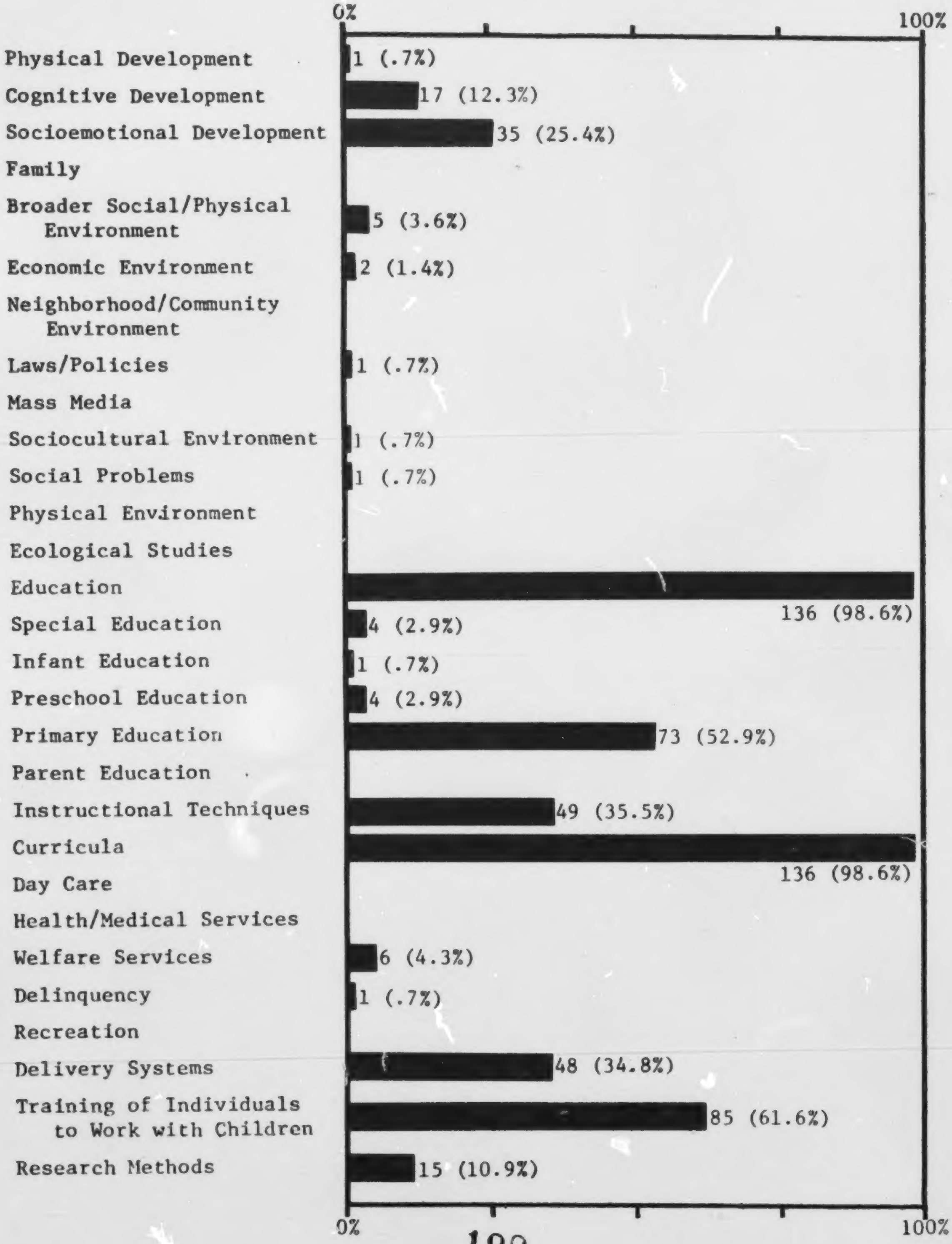
Category	No.	%[a]
Total Research on Educational Curriculum	136	(98.6)
Metric Education	72	(52.2)
Vocational Education	42	(30.4)
Career Education	28	(20.3)
Consumers Education	18	(13.0)
Math	12	(8.7)
Science	9	(6.5)
Social Studies	8	(5.8)
Language Arts	5	(3.6)
Fine Arts	3	(2.2)
Physical Education	3	(2.2)
Health Education	2	(1.4)
Citizenship	2	(1.4)
Cultural Awareness	1	(.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BOAE FY '77 early childhood research (138 projects).

Figure 26

Distribution of BOAE FY '77 Early Childhood Research Projects, by Area of Research (N=138)



Note. Categories are not mutually exclusive.

Table 116

Distribution of BOAE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	60	(43.5)
Place of Employment	7	(5.1)
Community Center	4	(2.9)
Home	1	(.7)
Group Care Facility	1	(.7)
Residential Institution	1	(.7)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 73(52.9%) of the BOAE early childhood projects, for which information on location of research was not available.

[a] Percentage of total BOAE FY '77 early childhood research (138 projects).

Table 117

Distribution of BOAE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	74	(53.6)
Three to Four Years	4	(2.9)
Prenatal	1	(.7)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 63(45.7%) of the BOAE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total BOAE FY '77 early childhood research (138 projects).

Table 118

Breakdown of BOAE FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Bilingual	20	(14.5)
Gifted	15	(10.9)
Physically Handicapped	11	(8.0)
Academically Slow	9	(6.5)
Intellectually Handicapped	8	(5.8)
Educationally Disadvantaged	4	(2.9)
Delinquent	1	(.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BOAE FY '77 early childhood research (138 projects).

Table 119

Breakdown of BOAE FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	49	(35.5)
Individual Instruction	19	(13.8)
Bilingual Education	9	(6.5)
Nongraded Classes	4	(2.9)
TV Instruction	2	(1.4)
Team Teaching	1	(.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BOAE FY '77 early childhood research (138 projects).

Division of International Education
Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $.7 million
- Number of Early Childhood Research Projects Active in FY '77: 44
- Mission and/or Functions in Early Childhood Research:

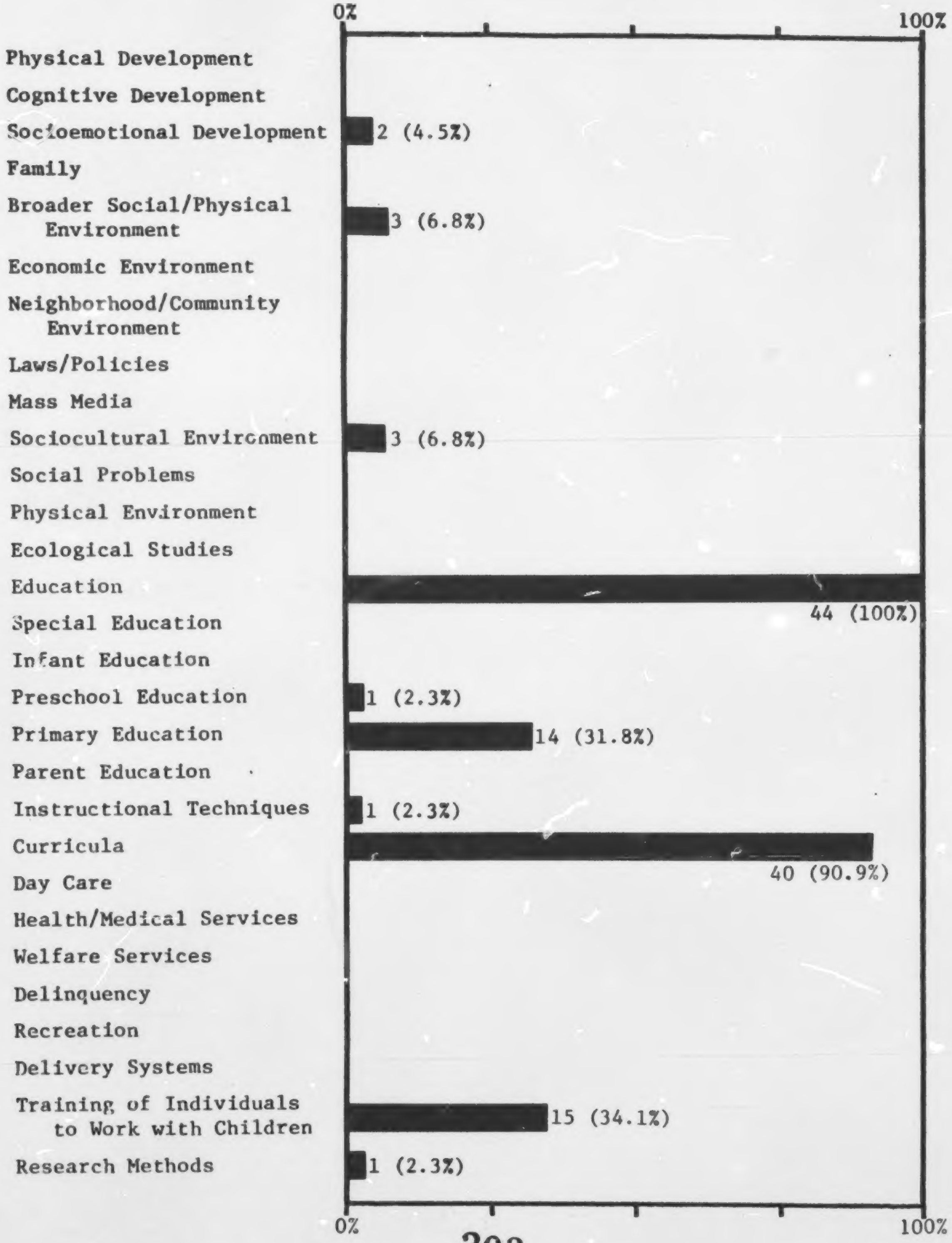
The Division of International Education (DIE) of the U. S. Office of Education (OE) plans and administers a variety of training, institutional development, and research programs and services to expand and improve the international dimensions of American education. While each program has its specific focus, the emphasis in most programs is on foreign language and area studies and the non-Western world. The DIE also administers ethnic heritage studies programs, which seek to develop intercultural understanding within this country, and provides a variety of staff services in the field of international education. The Ethnic Heritage Studies program provides grants to non-profit private and public educational agencies, institutions, or organizations to assist individuals in understanding their own heritage and the heritages of other groups, through curriculum materials development or dissemination, teacher training, and community activities.

Description of FY '77 Early Childhood Activity

As Figure 27 indicates, the Division of International Education focuses its research primarily on instruction and curriculum development. In keeping with its mission to develop intercultural understanding within this country, cultural awareness (82%) is the only specific curriculum area to receive substantial attention. The training of individuals to work with children is a component of 34% of the projects.

Figure 27

Distribution of DIE FY '77 Early Childhood Research Projects, by Area of Research (N=44)



Note. Categories are not mutually exclusive.

Table 120

Distribution of DIE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	18	(40.9)
Three to Four Years	1	(2.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 26 (59.1%) of the DIE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total DIE FY '77 early childhood research (44 projects).

Table 121

Breakdown of DIE FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	40	(90.9)
Cultural Awareness	36	(81.8)
Language Arts	2	(4.5)
Fine Arts	2	(4.5)
Social Studies	1	(2.3)
Vocational Education	1	(2.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total DIE FY '77 early childhood research (44 projects).

Office of Bilingual Education
U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $75.0 million
- Number of Early Childhood Research Projects Active in FY '77: 464
- Mission and/or Function in Early Childhood Research:

The Office of Bilingual Education, funded under Title VII, develops and operates bilingual programs aimed at meeting the special educational needs of children who come from environments where the dominant language is not English and who have limited English-speaking ability. Children speaking Indo-European, Asian-Pacific, Native American, and Eskimo languages are served. Curriculum development, staff training and parent and community involvement are important aspects of the Division's projects. The grants funded under ESEA Title VII for bilingual education are to be used to provide equal education opportunities through basic educational programs at the elementary levels for students and training programs for teachers. The Office operates a network of centers which develop, disseminate and field test curriculum materials for use in the classroom.

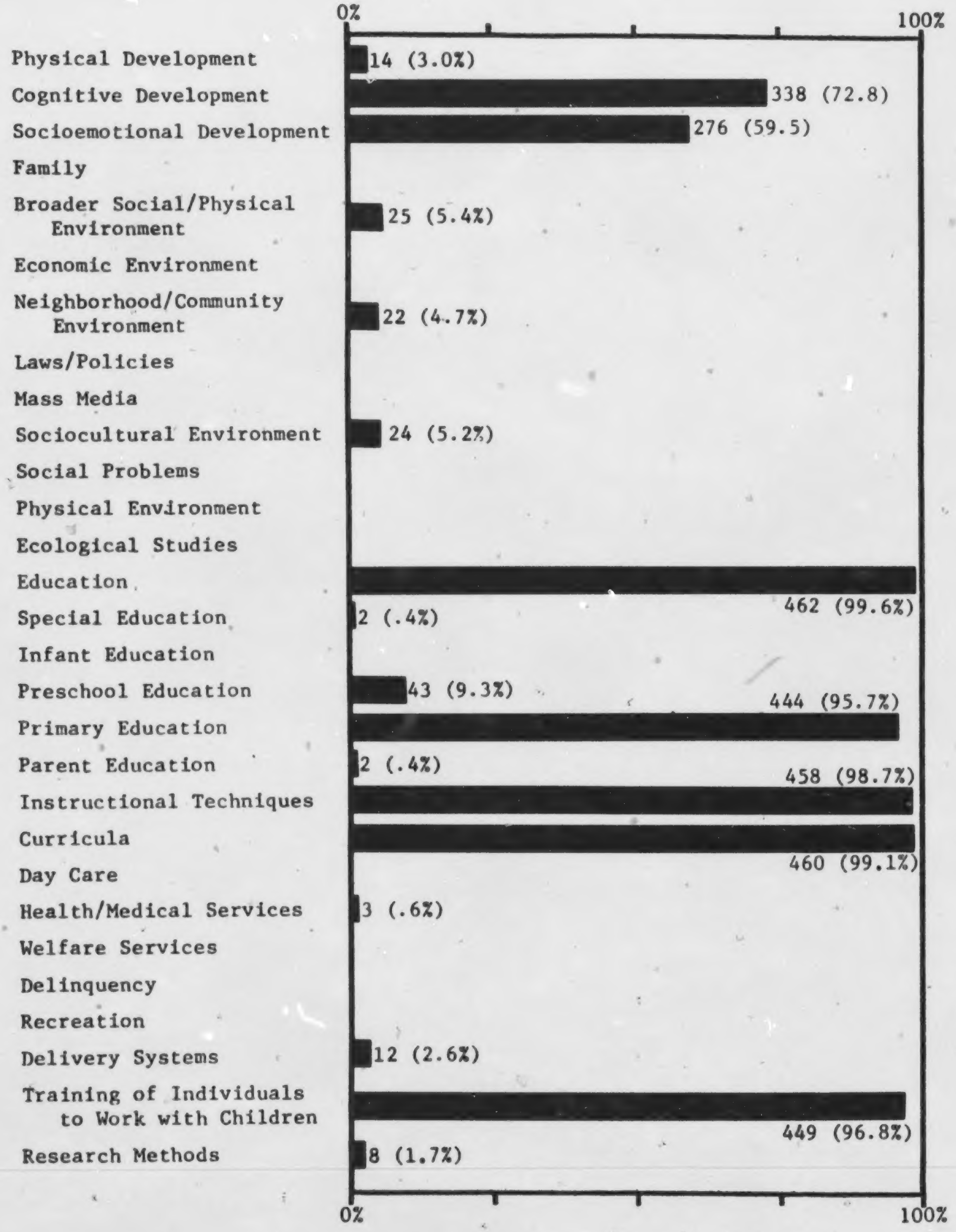
Description of FY '77 Early Childhood Activity

The research emphases of OBE, as indicated in Figure 28, are on the areas of instruction (100%), curriculum (99%), instructional techniques (99%), training of individuals to work with children (97%), and primary education (96%).

In keeping with the mission of OBE to meet the educational needs of children of limited English speaking ability, the major research emphasis within the instructional techniques category is on bilingual education (98%). The primary foci in curriculum development are language arts (97%) and cultural awareness (82%). In addition, socioemotional development, (perception of self, 57.5%, and socioemotional factors relating to education, 14.9%), and cognitive development (cognitive achievement, 49.6%, and language development, 48.5%) receive considerable attention. The majority of the research is conducted in classroom settings.

Figure 28

Distribution of OBE FY '77 Early Childhood Research Projects, by Area of Research (N=464)



Note. Categories are not mutually exclusive.

Table 122

Distribution of OBE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	454	(97.8)
Home	2	(.4)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 10(2.2%) of the OBE early childhood projects, for which information on location of research was not available.

[a] Percentage of total OBE FY '77 early childhood research (464 projects).

Table 123

Distribution of OBE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	452	(97.4%)
Three to Four Years	54	(11.6)
One to Three Years	1	(.2)
Infancy	1	(.2)
Prenatal	1	(.2)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 9(1.9%) of the OBE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total OBE FY '77 early childhood research (464 projects).

Table 124

Breakdown of OBE FY '77 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	338	(72.8)
Cognitive Achievement	230	(49.6)
Language Development	225	(48.5)
Cognitive Factors relating to Education	122	(26.3)
Perception	17	(3.7)
Reading	11	(2.4)
Problem Solving	5	(1.1)
Memory	2	(.4)
Creativity	1	(.2)
Total Research on Socioemotional Development	276	(59.5)
Perception of Self	267	(57.5)
Socioemotional Factors relating to Education	69	(14.9)
Attitudes	50	(10.8)
Personality	6	(1.3)
Emotional Development	3	(.6)
Interpersonal Relationships	3	(.6)
Development of Values/Morals	1	(.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total OBE FY '77 early childhood research (464 projects).

Table 125

Breakdown of OBE FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	458	(98.7)
Bilingual Education	456	(98.3)
Individualized Instruction	76	(16.4)
Tutorial Education	25	(5.4)
Team Teaching	21	(4.5)
Peer Teaching	11	(2.4)
Open Classroom	10	(2.2)
Cross-age Teaching	6	(1.3)
Nongraded Classes	3	(.6)
TV Instruction	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OBE FY '77 early childhood research (464 projects).

Table 126

Breakdown of OBE FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	460	(99.1)
Language Arts	450	(97.0)
Reading	432	(93.1)
Cultural Awareness	382	(82.3)
Math	359	(77.4)
Social Studies	318	(68.5)
Science	215	(46.3)
Fine Arts	89	(19.2)
Physical Education	44	(9.5)
Health Education	18	(3.9)
Vocational Education	11	(2.4)
Education for Parenthood	5	(1.1)
Environmental Education	3	(.6)
Drug Abuse Education	1	(.2)
Sex Education	1	(.2)
Consumer Education	1	(.2)
Metric Education	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OBE FY '77 early childhood research (464 projects).

Office of Career Education
U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $6.6 million
- Number of Early Childhood Research Projects Active in FY '77: 115
- Mission and/or Function in Early Childhood Research:

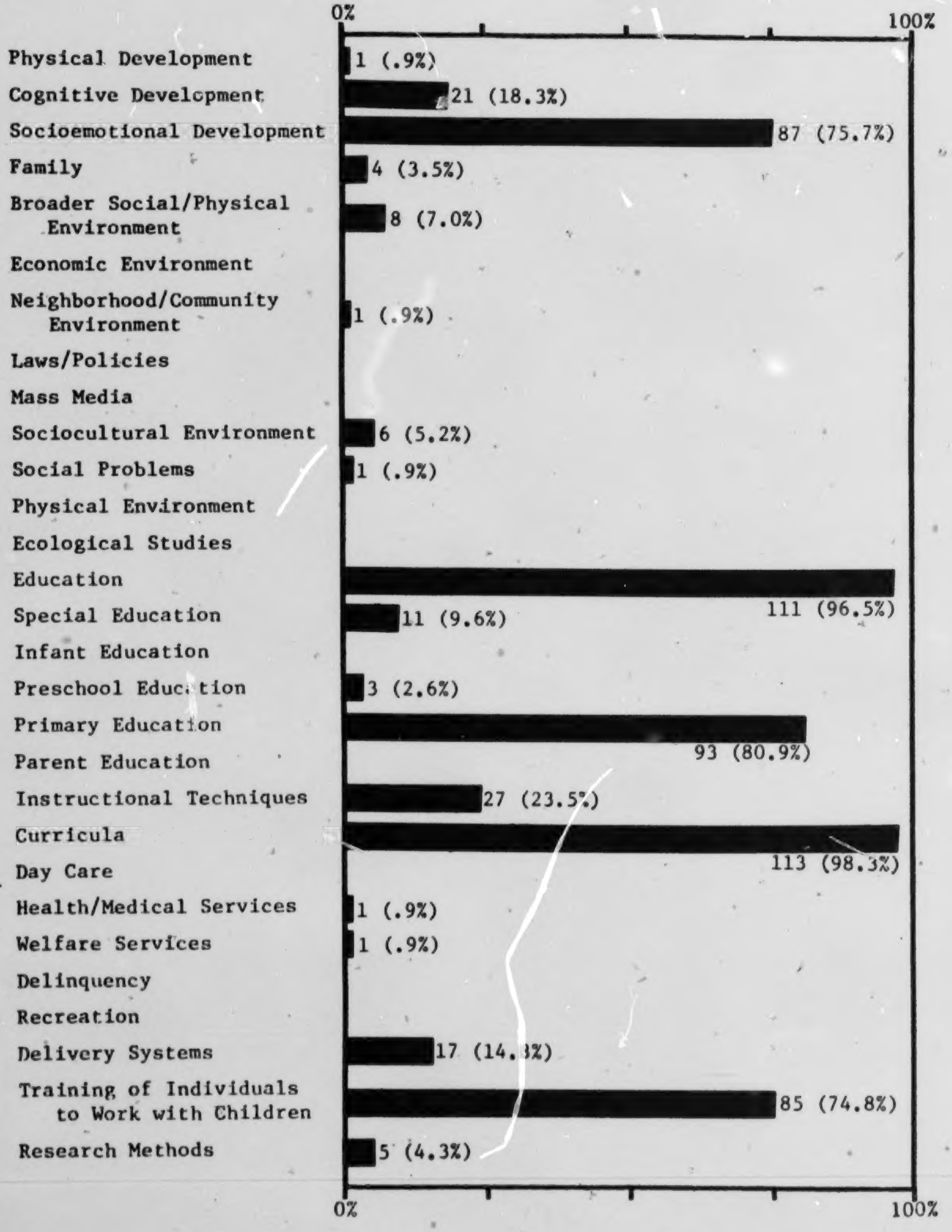
In Section 406 of the Educational Amendments Act of 1974 (PL 93-380), the USOE is called upon to support exemplary models and programs of career education; this is now being accomplished through the Office of Career Education. The Office provides grants for nonprofit making corporations, universities and colleges, and state or local authorities to develop career awareness curriculum for primary school children and career experiences for adolescents.

Description of FY '77 Early Childhood Activity

The Office of Career Education continues to devote a large part of its monies to educational research (97%), particularly career education curriculum development (98%), primary education (81%), staff training (75%), instructional techniques (24%) and delivery systems (15%). Most of the projects focus on socioemotional development (76%), and in particular, motivation (64%), attitudes (28%) and self perception (13%). Cognitive development (18%) receives some attention, with cognitive achievement (10%) as the most important subcategory. The research is located mostly in the classroom (69%), and the target populations include the educationally disadvantaged (46%) and gifted children (11%). Target groups are drawn almost exclusively from the five to ten year age range.

Figure 29

Distribution of OCE FY '77 Early Childhood Research Projects, by Area of Research (N=115)



Note. Categories are not mutually exclusive.

Table 127

Distribution of OCE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	79	(68.7)
Home	2	(1.7)
Medical Clinic/Hospital	1	(.9)
Residential Institution	1	(.9)
Place of Employment	1	(.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 35(30.4%) of the OCE early childhood projects, for which information on location of research was not available.

[a] Percentage of total OCE FY '77 early childhood research (115 projects).

Table 128

Distribution of OCE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	98	(85.2)
Three to Four Years	3	(2.6)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 16(13.9%) of the OCE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total OCE FY '77 early childhood research (115 projects).

Table 129

Breakdown of OCE FY '77 Early Childhood Research Projects on Children with Special Characteristics

Category	No.	%[a]
Educationally Disadvantaged	53	(46.1)
Gifted	13	(11.3)
Physically Handicapped	10	(8.7)
Intellectually Handicapped	6	(5.2)
Bilingual	5	(4.3)
Academically Slow	2	(1.7)
Emotionally Ill	2	(1.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '77 early childhood research (115 projects).

Table 130

Breakdown of OCE FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	27	(23.5)
Individualized Instruction	5	(4.3)
TV Instruction	4	(3.5)
Bilingual Education	4	(3.5)
Volunteer Service	4	(3.5)
Nongraded Classes	2	(1.7)
Open Classroom	1	(.9)
Cross-age Teaching	1	(.9)
Tutorial Education	1	(.9)
Team Teaching	1	(.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '77 early childhood research (115 projects).

Table 131

Breakdown of OCE FY '77 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	21	(18.3)
Cognitive Achievement	12	(10.4)
Problem Solving	10	(8.7)
Language Development	3	(2.6)
Cognitive Factors relating to Education	3	(2.6)
Perception	1	(.9)
Intellectual Handicaps	1	(.9)
Total Research on Socioemotional Development	87	(75.7)
Motivation	73	(63.5)
Attitudes	32	(27.8)
Perception of Self	15	(13.0)
Interpersonal Relationships	5	(4.3)
Development of Values/Morals	4	(3.5)
Socioemotional Factors relating to Education	4	(3.5)
Personality	2	(1.7)
Emotional Development	1	(.9)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total OCE FY '77 early childhood research (115 projects).

Table 132

Breakdown of OCE FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	113	(98.3)
Career Education	113	(98.3)
Vocational Education	8	(7.0)
Language Arts	6	(5.2)
Math	6	(5.2)
Science	3	(2.6)
Cultural Awareness	1	(.9)
Social Studies	1	(.9)
Environmental Education	1	(.9)
Consumer Education	1	(.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '77 early childhood research (115 projects).

Office of Indian Education
U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $11.0 million
- Number of Early Childhood Research Projects Active in FY '77: 134
- Mission and/or Function in Early Childhood Research:

American Indians can be served through the efforts of Title I (Compensatory Education), Title III (Supplementary Services) or Title VII (Bilingual Education) of the Elementary and Secondary Education Act of 1965, and three other pieces of legislation: P.L. 93-638 (The Indian Self-Determination Act), P.L. 93-580 (authorizing the study of Indian affairs, and P.L. 92-318 (The Indian Education Act). This latter act established the Office of Indian Education and a National Advisory Council of Indian Education to help recommend policy on Indian education to Congress and the Commissioner of Education. The mission of the Office of Indian Education is to improve the quality of public education for Indian children.

Within Part B of the Indian Education Act the OIE is authorized to issue discretionary grants to any tribes and Indian organizations, state and local educational authorities to encourage projects which are designed to test and demonstrate the effectiveness of programs for improving educational opportunities for Indian children, such as bilingual/bicultural educational programs and special (programs to ameliorate the) health, social, and psychological problems of Indian children. The OIE has also been authorized, through Part A of the Act, to sponsor special educational project assistance to any school in the U. S. with more than 100 Indian children.

The early childhood mission of the Office of Indian Education is to fund the development and demonstration of early childhood education models designed to meet the special needs of Indian children from age three through third grade. The projects include day care centers with educational components, curriculum development and bilingual and bicultural education programs.

Description of FY '77 Early Childhood Activity

The Office of Indian Education devotes approximately 98% of its projects to curriculum development and emphasizes cultural awareness (81%), language arts (64%), reading (40%), and math (40%). Other prominent categories of education include primary education (69%), staff training (49%), preschool education (37%) and health/medical services (33%). Research on instructional techniques (74%) focuses on individualized instruction (40%), tutorial education (36%) and bilingual education (34%). Research on socio-emotional issues (76%) concentrates on self-perception (70%), attitudes (28%) and interpersonal relationships (28%). Within the area of cognitive development (58%), language development (40%) and cognitive achievement

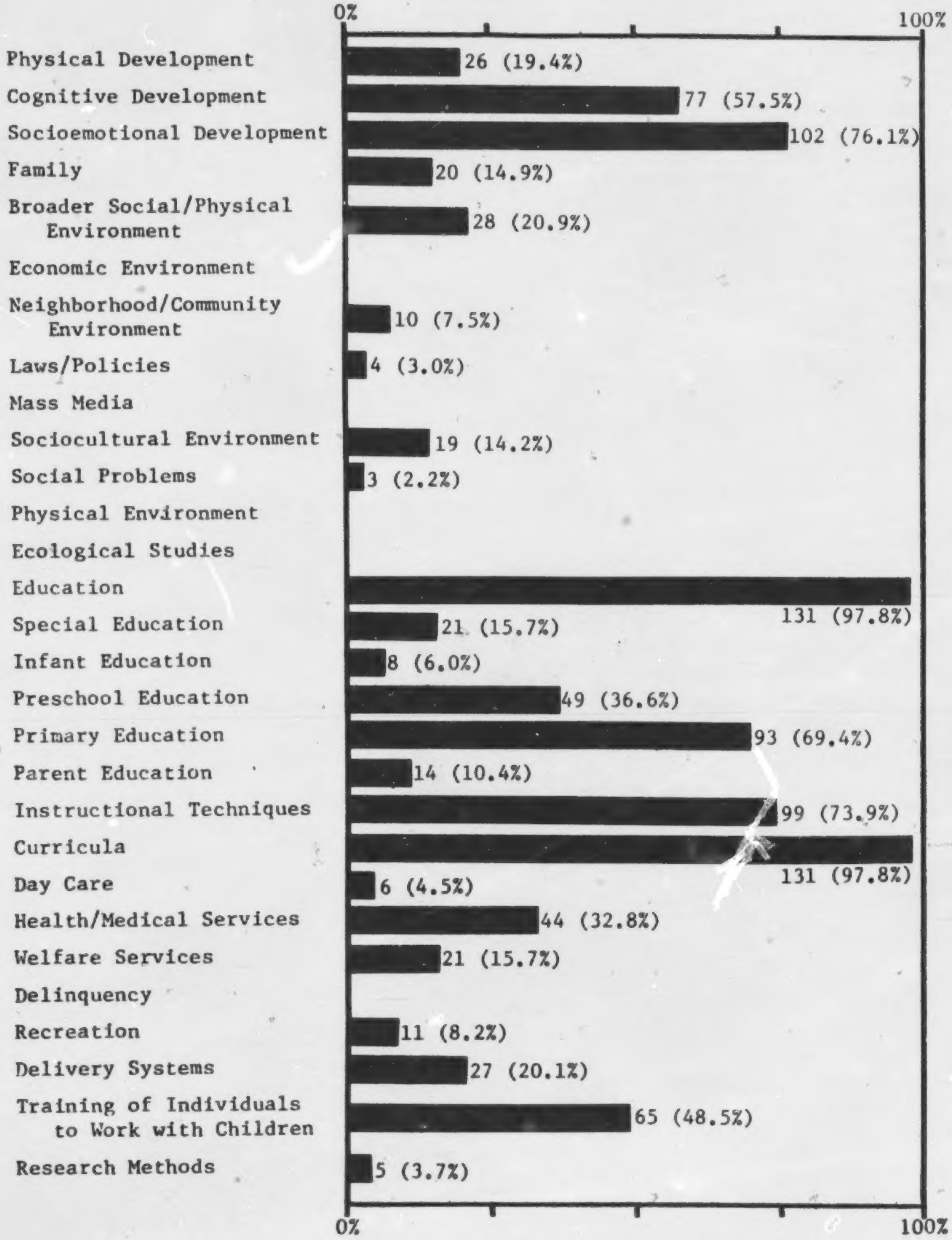
(22%) stand out. Seventy-one percent of the early childhood OIE projects are located in the classroom, and 15% in community centers. The children in the target groups range in age from one to three (10%), and three to four (37%), to five through ten years (77%).

Plans for FY '78

The Office of Indian Education will emphasize a variety of factors relating to education for Indian children. Areas of importance will include: the family, and particularly family structure, family functioning and parenting skills; the social environment, and interrelationships among people, institutions and services; and the physical environment, and facilities and housing. OIE indicates a high level of interest in program evaluation. Perception/attention, language, emotional and attitude development, career awareness, physical/intellectual handicaps, learning disabilities, and tests/measurements are of moderate concern. Physical disease, mass media and television, teaching innovations and equipment are of low interest to OIE.

Figure 30

Distribution of OIE FY '77 Early Childhood Research Projects, by Area of Research (N=134)



Note. Categories are not mutually exclusive.

Table 133

Distribution of OIE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	95	(70.9)
Community Center	21	(15.7)
Home	13	(9.7)
Group Care Facility	11	(8.2)
Residential Institution	5	(3.7)
Medical Clinic/Hospital	1	(.7)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 16(11.9%) of the OIE early childhood projects, for which information on location of research was not available.

[a] Percentage of total OIE FY '77 early childhood research (134 projects).

Table 134

Distribution of OIE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	103	(76.9)
Three to Four Years	49	(36.6)
One to Three Years	14	(10.4)
Infancy	9	(6.7)
Prenatal	1	(.7)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 25(18.7%) of the OIE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total OIE FY '77 early childhood research (134 projects).

Table 135

Breakdown of OIE FY '77 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	77	(57.5)
Language Development	54	(40.3)
Cognitive Achievement	30	(22.4)
Problem Solving	20	(14.9)
Perception	14	(10.4)
Concept Formation	10	(7.5)
Reading	7	(5.2)
Play	7	(5.2)
Learning	6	(4.5)
Attention	3	(2.2)
Creativity	2	(1.5)
Total Research on Socioemotional Development	102	(76.1)
Perception of Self	91	(67.9)
Attitudes	38	(28.4)
Interpersonal Relationships	37	(27.6)
Motivation	20	(14.9)
Emotional Development	13	(9.7)
Personality	11	(8.2)
Development of Values/Morals	5	(3.7)
Socioemotional Factors relating to Education	1	(.7)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total OIE FY '77 early childhood research (134 projects).

Table 136

Breakdown of OIE FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	99	(73.9)
Individualized Instruction	53	(39.6)
Tutorial Education	48	(35.8)
Bilingual Education	45	(33.6)
Volunteer Service	18	(13.4)
Cross-age Teaching	16	(11.9)
Nongraded Classes	8	(6.0)
Open Classroom	6	(4.5)
Peer Teaching	4	(3.0)
TV Instruction	3	(2.2)
Team Teaching	3	(2.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OIE FY '77 early childhood research (134 projects).

Table 137

Breakdown of OIE FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	131	(97.8)
Cultural Awareness	108	(80.6)
Language Arts	86	(64.2)
Reading	53	(39.6)
Math	53	(39.6)
Fine Arts	41	(30.6)
Social Studies	40	(29.9)
Science	35	(26.1)
Physical Education	31	(23.1)
Health Education	24	(17.9)
Education for Parenthood	23	(17.2)
Career Education	18	(13.4)
Vocational Education	17	(12.7)
Citizenship	9	(6.7)
Drug Abuse Education	5	(3.7)
Environmental Education	5	(3.7)
Consumer Education	4	(3.0)
Sex Education	1	(.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OIE FY '77 early childhood research (134 projects).

Office of Planning, Budgeting, and Evaluation
U. S. Office of Education, DHEW

- FY '77 Funding of Evaluations Related to Early Childhood: $9.6 million
- Number of Projects Related to Early Childhood Active in FY '77: 40
- Mission and/or Functions in Early Childhood Research:

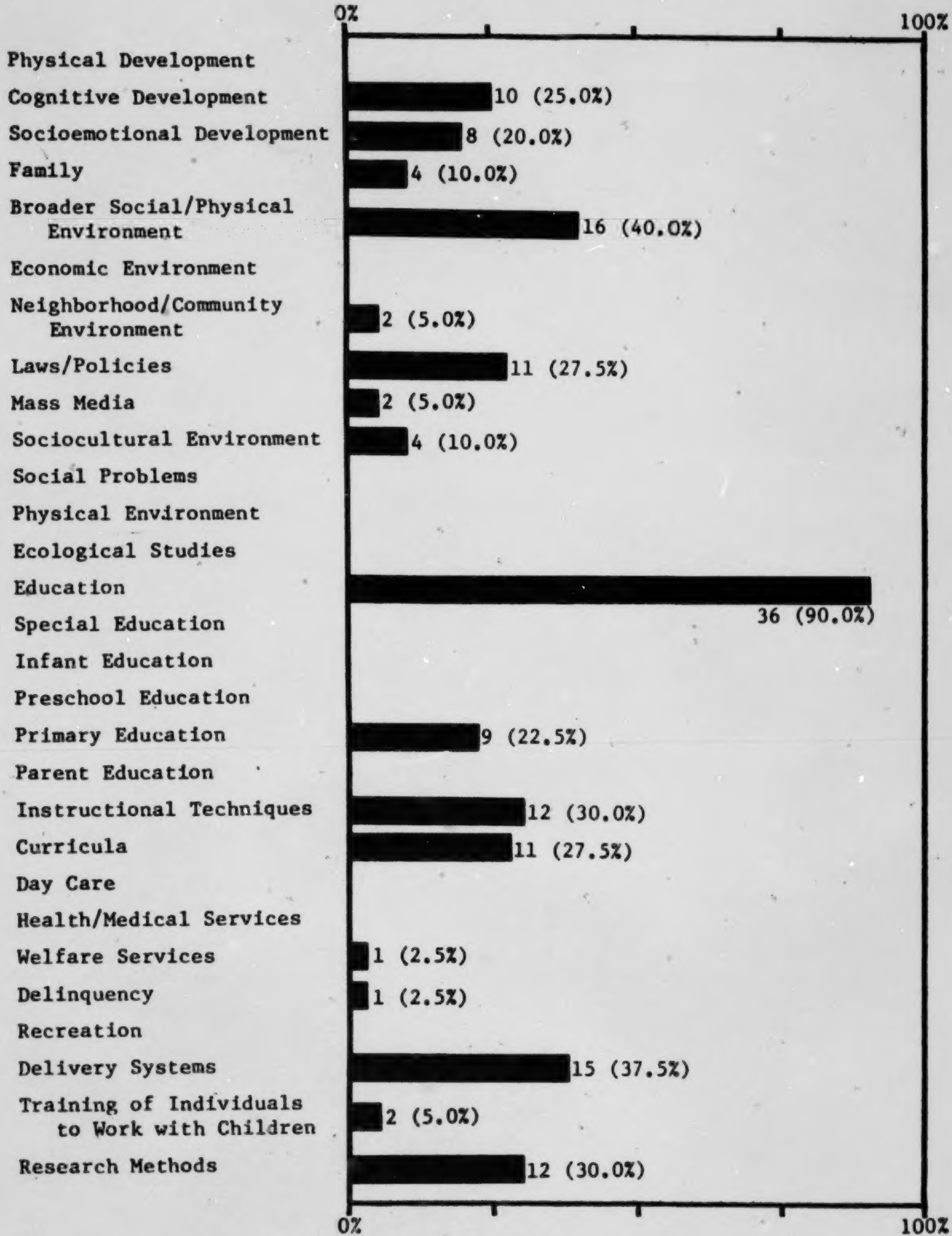
A major emphasis of OPBE is on evaluating OE programs through contracted projects which utilize research methodology. This office has primary responsibility for planning, budgeting, and evaluating programs administered by the Office of Education. These are Federal programs in elementary, secondary, post-secondary, vocational, career, and special education. OPBE helps the various organizational units of OE to establish program objectives and coordinates their planning and budgeting activities. It prepares analytical studies for developing educational policy and suggests the kinds of information to be collected for use in subsequent planning and evaluation activities.

Description of FY '78 Early Childhood Activity

The major areas of concern in OPBE projects are education (90%), delivery systems (38%), instructional techniques (30%), research methods (30%), curricula (28%), and primary education (23%). The interest in the social and physical environment (40%) and laws and policies (28%) reflect the commitment of OPBE to plan, analyze and develop educational policy. Cognitive development (25%), socioemotional development (20%) and the family comprise other areas of importance. The OPBE research projects generally pertain to the classroom setting (63%), and are targeted primarily on children aged five to ten years (43%).

Figure 31

Distribution of OPBE FY '77 Early Childhood Research Projects, by Area of Research (N=40)



Note. Categories are not mutually exclusive.

Table 138

Distribution of OPBE FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	25	(62.5)
Residential Institution	1	(2.5)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 14(35.0%) of the OPBE early childhood projects, for which information on location of research was not available.

[a] Percentage of total OPBE FY '77 early childhood research (40 projects).

Table 139

Distribution of OPBE FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	17	(42.5)
Three to Four Years	1	(2.5)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 23(5.75%) of the OPBE early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total OPBE FY '77 early childhood research (40 projects).

Table 140

Breakdown of OPBE FY '77 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	10	(25.0)
Cognitive Achievement	10	(25.0)
Reading	2	(5.0)
Language Development	1	(2.5)
Cognitive Factors relating to Education	1	(2.5)
Total Research on Socioemotional Development	8	(20.0)
Attitudes	7	(17.5)
Perception of Self	4	(10.0)
Interpersonal Relationships	1	(2.5)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total OPBE FY '77 early childhood research (40 projects).

Right to Read Effort
U. S. Office of Education, DHEW

- FY '77 Funding of Early Childhood Research: $13.6 million
- Number of Early Childhood Research Projects Active in FY '77: 247
- Mission and/or Functions in Early Childhood Research:

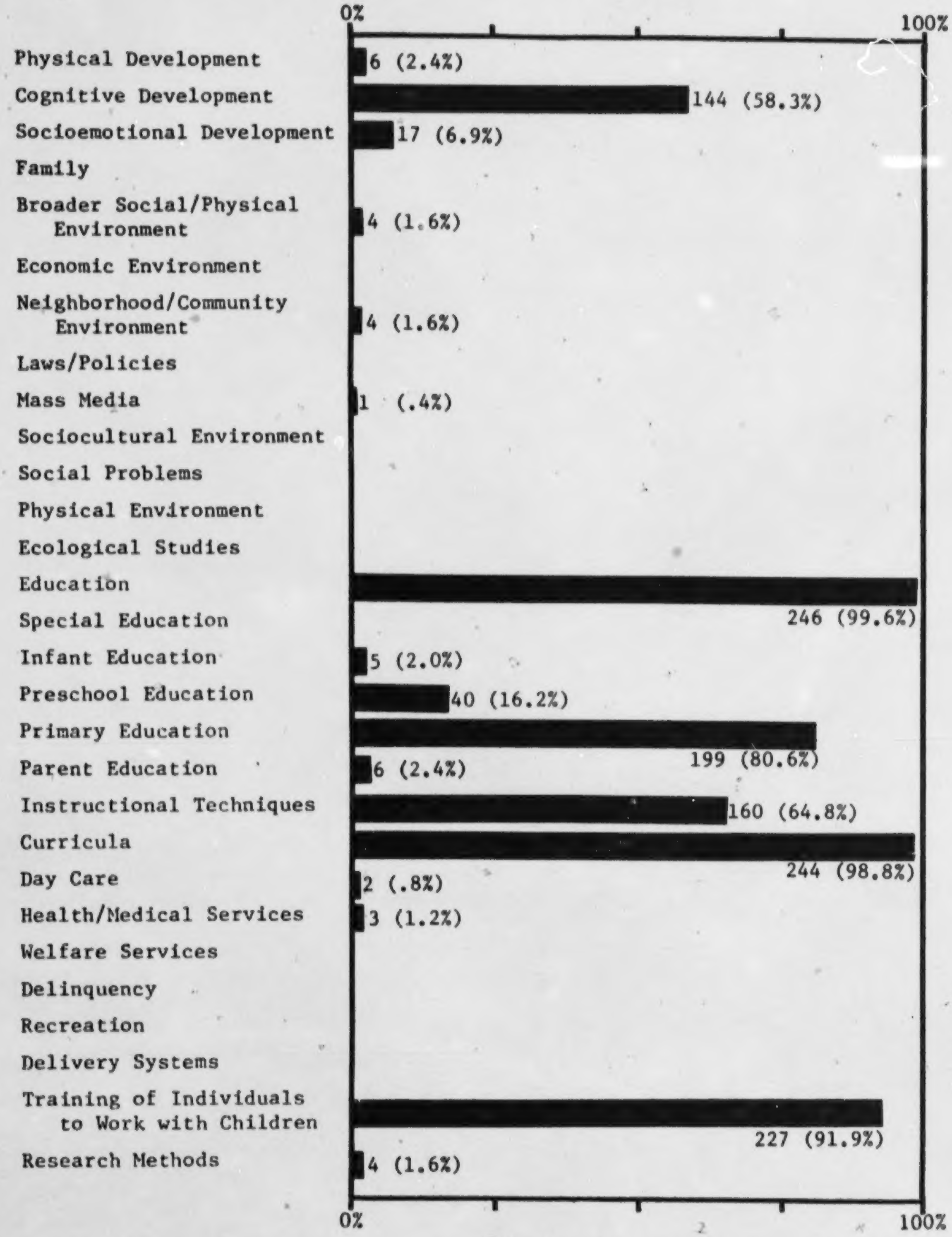
The National Right to Read Effort focuses on the reading literacy problems in this country. The goal of this effort is to prevent functional illiteracy and to provide corrective remediation for those who are presently experiencing the results of being functionally illiterate. The Right to Read Effort supports innovative demonstration projects designed to promote effective state and local reading programs.

Description of FY '77 Early Childhood Activity

The early childhood activity in Right to Read shows up primarily in the categories of education (100%), curricula (99%), training of individuals to work with children (92%), primary education (81%), instructional techniques (65%), and cognitive development (58%). Almost all of the curriculum development is focused on reading, of course. Major instructional techniques are individualized instruction (42%), tutorial instruction (20%), and bilingual instruction (9%). The agency mission to prevent illiteracy is clearly refelcted in the breakdown of projects on cognitive development (Table 143), which shows almost all of the activity focusing on reading (37%), cognitive achievement (24%), language development (9%), cognitive factors relating to education (9%), and imagery (4%). All projects are located in the school setting, and most of the children in the target groups are school-aged (91%), although the children in a significant proportion of projects are three to four years of age (17%).

Figure 32

Distribution of Right to Read FY '77 Early Childhood Research Projects, by Area of Research (N=247)



Note. Categories are not mutually exclusive.

Table 141

Distribution of Right to Read FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	247	(100)

Note. Categories not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total right to read FY '77 early childhood research (247 projects).

Table 142

Distribution of Right to Read FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	225	(91.1)
Three to Four Years	42	(17.0)
Infancy	1	(.4)
One to Three Years	1	(.4)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 5(2.0%) of the Right to Read early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total right to read FY '77 early childhood research (247 projects).

Table 143

Breakdown of Right to Read FY '77 Early Childhood Research Projects on Cognitive Development

Category	No.	%[a]
Total Research on Cognitive Development	144	(58.3)
Reading	92	(37.2)
Cognitive Achievement	58	(23.5)
Language Development	21	(8.5)
Cognitive Factors relating to Education	21	(8.5)
Imagery	10	(4.0)
Perception	3	(1.2)
Creativity	3	(1.2)
Learning	2	(.8)
Problem Solving	2	(.8)
Sleep/Dreaming	2	(.8)
Memory	1	(.4)
Concept Formation	1	(.4)
Attention	1	(.4)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total Right to Read FY '77 early childhood research (247 projects).

Table 144

Breakdown of Right to Read FY '77 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	160	(64.8)
Individualized Instruction	103	(41.7)
Tutorial Education	49	(19.8)
Bilingual Education	22	(8.9)
Volunteer Service	5	(2.0)
TV Instruction	4	(1.6)
Peer Teaching	3	(1.2)
Cross-age Teaching	2	(.8)
Team Teaching	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total Right to Read FY '77 early childhood research (247 projects).

Table 145

Breakdown of Right to Read FY '77 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	244	(98.8)
Language Arts	244	(98.8)
Reading	243	(98.4)
Cultural Awareness	4	(1.6)
Fine Arts	2	(.8)
Education for Parenthood	2	(.8)
Social Studies	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total Right to Read FY '77 early childhood research (247 projects).

U.S. Department of Agriculture

- FY '77 Funding of Early Childhood Research: (Not available at time of report)
- Number of Early Childhood Research Projects Active in FY '77: 123
- Mission and/or Functions in Early Childhood Research:

The USDA supports research in the Land Grant Institutions which is designed to develop human resource potential. The focus is on the family or household as a functioning unit, and the child as a source in the unit. The work includes studies of issues related to childhood such as nutritional status, early childhood education, the effects of the family, social and physical environment, and cognitive and physical developmental processes. In addition, the USDA Extension Service supports educational programming for children in a variety of areas, e.g., family life, day care, and home economics.

Description of FY '77 Early Childhood Activity

USDA activity can be seen in Figure 33 in a wide range of areas: the broader social and physical environment (53%), physical development (39%), the family (38%), sociocultural factors (28%), cognitive development (22%), health and medical services (21%), education (20%), and research methods (15%).

Research on the family focuses primarily on the family/society interface (15%), and parental behavior and roles (14%), although some activity is apparent in a number of the other subcategories shown in Table 151.

Research on physical development, one of the most prominent areas, is oriented for the most part toward nutrition (37%), physical characteristics (11%), pregnancy and childbirth (8%), and body growth (7%). Most of the work on cognitive development relates to cognitive achievement (11%), while the research on socioemotional development concentrates on attitudes (20%) and interpersonal relationships (15%).

More than half of the USDA projects are classified as basic research (56%), and most of the others are applied research (33%).

Plans for FY '78

Areas of strong research interest in FY '78 include the physical environment of the home, the social environment, interpersonal relationships, the family's interface with society, and parenting skills. Preschool age children are listed as the target population of greatest interest. In addition, USDA indicates moderate to low levels of interest in cognitive development, physical development, day care, education, health and welfare services, methodology, planning, and dissemination.

Table 146

Distribution of USDA FY '77
Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	69	(56.1)
Applied	41	(33.3)
Policy	6	(4.9)
Evaluation	4	(3.3)
Social Accounting	2	(1.6)
Support and Utilization	1	(.8)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '77 early childhood research (123 projects).

Table 147

Distribution of USDA FY '77 Early Childhood
Research Projects, by Type of Funding Arrangement

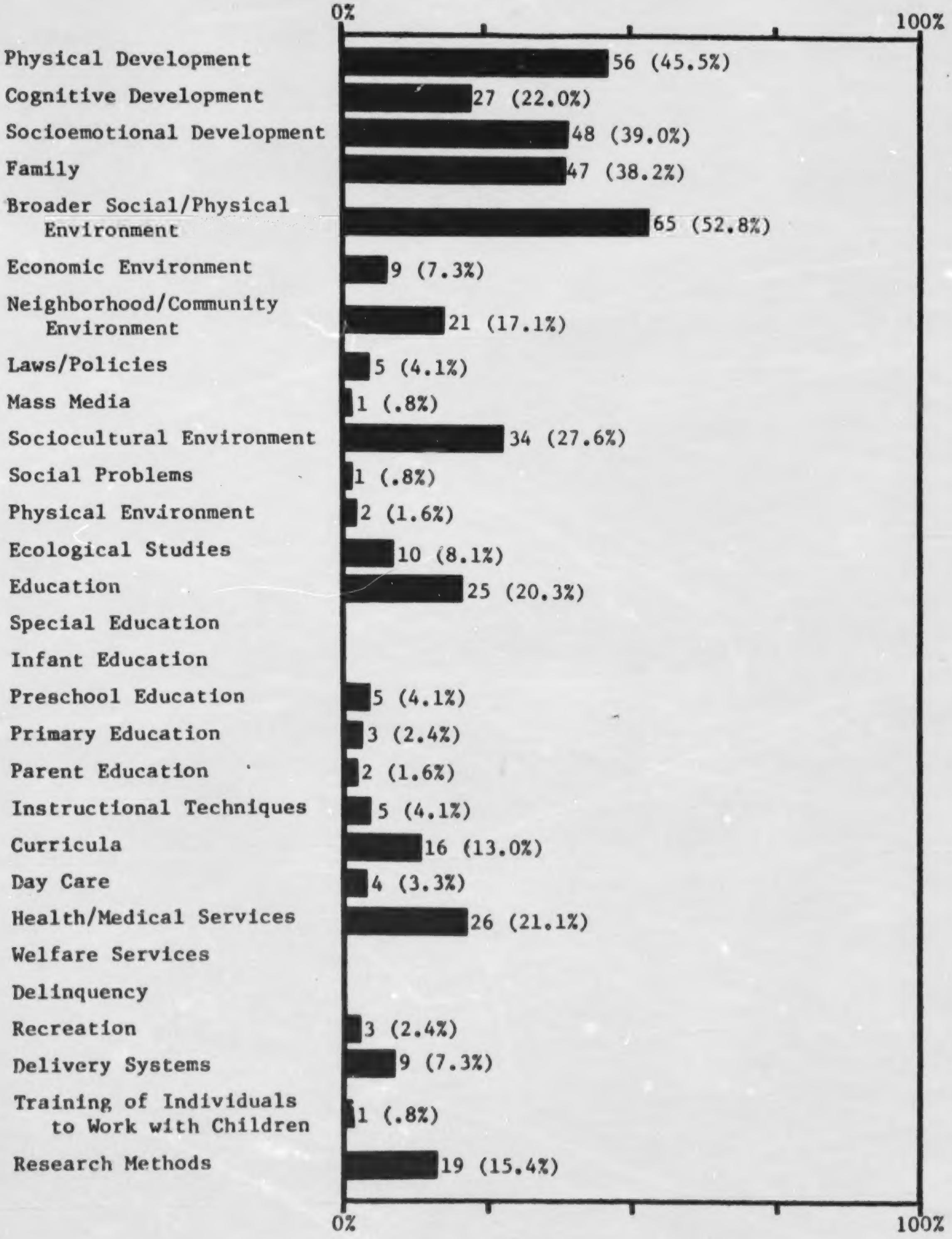
Type of Funding Arrangement	No.	%[a]
Agreement	92	(74.8)
Contract	19	(15.4)
Sole Source	19	(15.4)
Grant	11	(8.9)
Intramural	1	(.8)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '77 early childhood research (123 projects).

Figure 33

Distribution of USDA FY '77 Early Childhood Research Projects, by Area of Research (N=123)



Note. Categories are not mutually exclusive.

Table 148

Distribution of USDA FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Classroom	15	(12.2)
Home	13	(10.6)
Laboratory	5	(4.1)
Group Care Facility	3	(2.4)
Medical Clinic/Hospital	3	(2.4)
Community Center	2	(1.6)
Residential Institution	1	(.8)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 86(69.9%) of the USDA early childhood projects, for which information on location of research was not available.

[a] Percentage of total USDA FY '77 early childhood research (123 projects).

Table 149

Distribution of USDA FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	43	(35.0)
Three to Four Years	37	(30.1)
Infancy	19	(15.4)
One to Three Years	14	(11.4)
Prenatal	4	(3.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 52(42.3%) of the USDA early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total USDA FY '77 early childhood research (123 projects).

Table 150

Breakdown of USDA FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	56	(45.5)
Nutrition	46	(37.4)
Physical Characteristics	13	(10.6)
Pregnancy and Childbirth	10	(8.1)
Body Growth	8	(6.5)
Motor Development	3	(2.4)
Physical Disease	2	(1.6)
Genetics	1	(.8)
Epidemiology	1	(.8)
Total Research on Cognitive Development	27	(22.0)
Cognitive Achievement	13	(10.6)
Problem Solving	5	(4.1)
Cognitive Factors relating to Education	5	(4.1)
Perception	3	(2.4)
Language Development	2	(1.6)
Memory	2	(1.6)
Concept Formation	2	(1.6)
Play	2	(1.6)
Reading	1	(.8)
Imagery	1	(.8)

Table 150 (Continued)

Breakdown of USDA FY '77 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Socioemotional Development	48	(39.0)
Attitudes	24	(19.5)
Interpersonal Relationships	19	(15.4)
Emotional Development	7	(5.7)
Personality	7	(5.7)
Perception of Self	4	(3.3)
Socioemotional Factors relating to Education	4	(3.3)
Motivation	3	(2.4)
Development of Values/Morals	3	(2.4)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total USDA FY '77 early childhood research (123 projects).

Table 151

Breakdown of USDA FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	47	(38.2)
Family/Society Interface	18	(14.6)
Parental Behavior/Roles	17	(13.8)
Parent-Child Relationships	7	(5.7)
Child Rearing	7	(5.7)
Family Health	6	(4.9)
Physical Environment of the Home	4	(3.3)
Family Structure	3	(2.4)
Child Care Arrangements	3	(2.4)
Impact of Family on Education	3	(2.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '77 early childhood research (123 projects).

Bureau of the Census
U.S. Department of Commerce

- Mission and/or Functions in Early Childhood Research:

The Census Bureau publishes and disseminates reports on the demographic and socioeconomic characteristics of the population. These reports are based on the decennial census, on recurring surveys or intermittent or one-time surveys or special analysis.

A recent special report, drawing on a variety of Federal data sources in and outside of Census, was entitled "Characteristics of American Children and Youth: 1976" published and issued January 1978. This report was expanded to address children; the earlier version was "Characteristics of American Youth: 1974, Current Population Reports, Series P-23, No. 51."

A sampling of recent Current Population Reports is indicated below:

Current Population Reports
Series P-20

No.	
305	Geographic Mobility: March 1975 to March 1976
306	Marital Status and Living Arrangements: March 1976
307	Population Profile of the United States: 1976
310	Persons of Spanish Origin in the United States: March 1976
311	Household and Family Characteristics: March 1976
312	Marriage, Divorce, Widowhood, and Remarriage by Family Characteristics: June 1975

Series P-25

646	Estimates of the Population of States, by Age: July 1, 1975 and 1976 (Advance Report)
701	Gross Migration by County: 1965 to 1970
704	Projections of the Population of the United States: 1977 to 2050

Series P-60

104	Household Money Income in 1975 and Selected Social and Economic Characteristics of Households
105	Money Income in 1975 of Families and Persons in the United States
106	Characteristics of the Population Below Poverty Level: 1975
107	Money Income and Poverty Status of Families and Persons in the United States: 1976

National Science Foundation

- FY '77 Funding of Early Childhood Research: $1.4 million
- Number of Early Childhood Research Projects Active in FY '77: 39
- Mission and/or Functions in Early Childhood Research:

The NSF Act (1950) states that the Foundation is established "To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." Among the Foundation's general functions are:

1. Initiating and supporting basic scientific research and programs to strengthen scientific research potential and science education programs at all levels and appraising the impact of research upon industrial development and the general welfare.
2. Evaluating the status and needs of the various sciences taking into consideration the results of this evaluation in correlating its research and educational programs with other Federal and non-Federal programs;
3. Recommending and encouraging the pursuit of national policies for the promotion of basic research and education in the sciences.

Following reorganization of the Foundation in 1975, greater emphasis was placed on support of research on the development of behavior, including cognitive development, socioemotional development and language acquisition. Basic research related to childhood is supported by the Division of Behavorial and Neural Sciences and the Division of Social Sciences. No specific areas of research on childhood receive special emphasis.

Description of FY '77 Early Childhood Activity

Most of the 39 NSF projects concentrate on only a few of the categories shown in Figure 35: cognitive development (87%), the family (29%), socioemotional development (21%), the broader social and physical environment (26%), and research methods (21%). Research on cognitive development, which is the major focus of the NSF activity, is distributed across a large number of the subcategories in Table 158, although it focuses primarily on language development (51%), learning (41%), cognitive factors relating to education (36%), cognitive achievement (33%), problem solving (26%), and concept formation (26%). The most prominent subcategories of socioemotional development are interpersonal relationships (15%), attitudes (10%), and personality (10%).

Research on the family is also distributed across many subcategories, showing a diversity of interests in the NSF research.

Most of the projects are classified as basic research (82%), and they are all funded through grants. All of the age groups except for the prenatal period are represented in the projects. The most common research setting is the laboratory (33%), followed by home (21%), and classroom (18%).

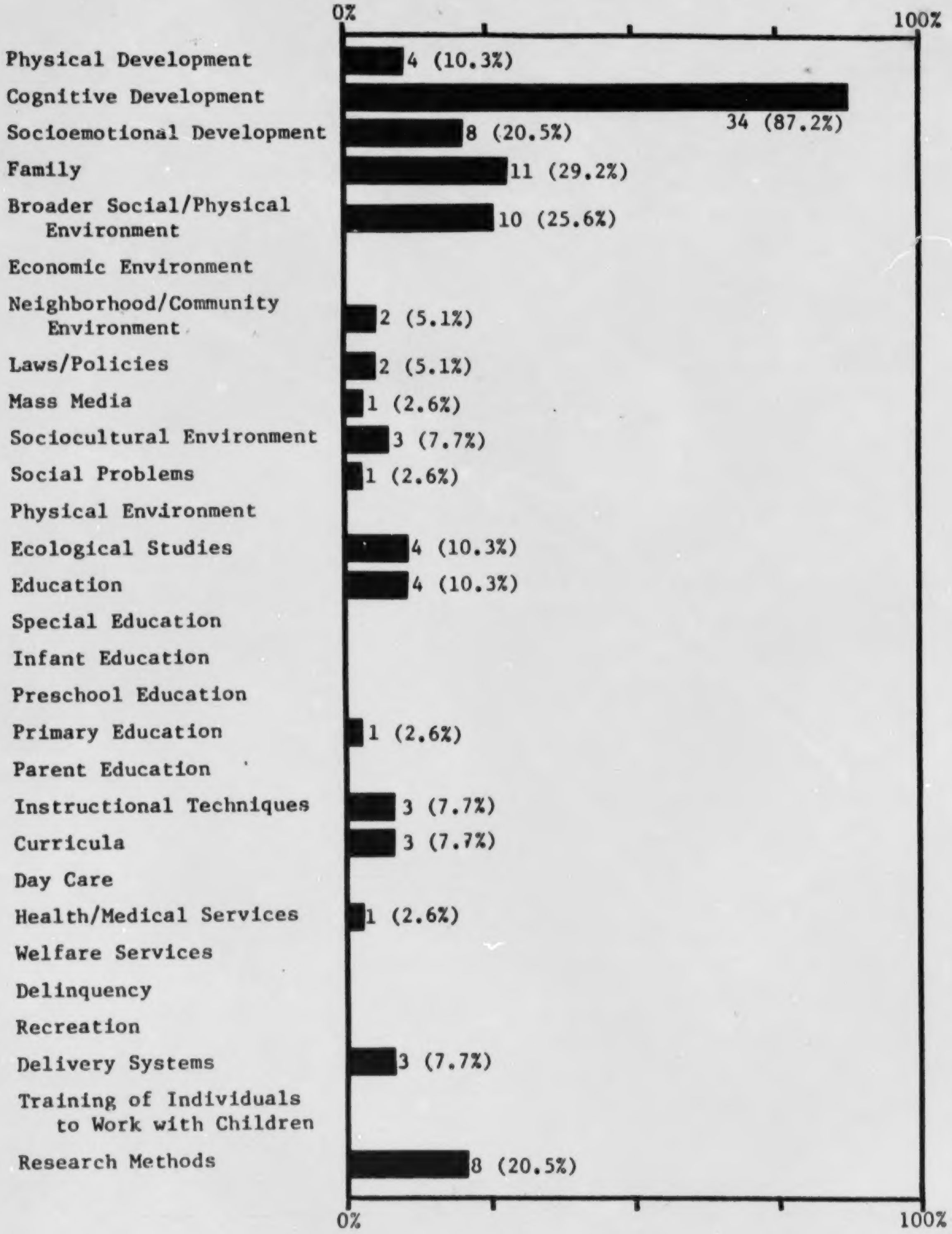
Plans for FY '78

The NSF's primary research interest will continue to be in the areas of cognitive and socioemotional development, particularly perception, thought processes, language development, self-concept, interpersonal relationships, attitudes and moral development.

Moderate to low levels of research interest are indicated for the areas of family structure, the family's interface with society, the global approach, and methodology.

Figure 35

Distribution of NSF FY '77 Early Childhood Research Projects, by Area of Research (N=39)



Note. Categories are not mutually exclusive.

Table 152

Distribution of NSF FY '77 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	32	(82.1)
Applied	4	(10.3)
Policy	1	(2.6)
Social Accounting	1	(2.6)
Support and Utilization	1	(2.6)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NSF FY '77 early childhood research (39 projects).

Table 153

Distribution of NSF FY '77 Early Childhood Research Projects, by Type of Funding Arrangement

Type of Funding Arrangement	No.	%[a]
Grant	39	(100)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NSF FY '77 early childhood research (39 projects).

Table 154

Distribution of NSF FY '77 Early Childhood Research Projects, by Location of Research

Location	No.	%[a]
Laboratory	13	(33.3)
Home	8	(20.5)
Classroom	7	(17.9)
Community Center	2	(5.1)
Medical Clinic/Hospital	1	(2.6)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 15 (38.5%) of the NSF early childhood projects, for which information on location of research was not available.

[a] Percentage of total NSF FY '77 early childhood research (39 projects).

Table 155

Distribution of NSF FY '77 Early Childhood Research Projects, by Age Group

Age Group	No.	%[a]
Five to Ten Years	18	(46.2)
Three to Four Years	14	(35.9)
One to Three Years	11	(28.2)
Infancy	7	(17.9)

Note. Categories not mutually exclusive; they are ranked according to number of projects. Not reflected in this table are 9 (23.1%) of the NSF early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total NSF FY '77 early childhood research (39 projects).

Table 156

Breakdown of NSF FY '77 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	34	(87.2)
Language Development	20	(51.3)
Learning	16	(41.0)
Cognitive Factors relating to Education	14	(35.9)
Cognitive Achievement	13	(33.3)
Problem Solving	10	(25.6)
Concept Formation	10	(25.6)
Perception	5	(12.8)
Memory	5	(12.8)
Creativity	5	(12.8)
Attention	5	(12.8)
Reading	2	(5.1)
Play	2	(5.1)
Imagery	2	(5.1)
Intellectual Handicaps	1	(2.6)
Total Research on Socioemotional Development	8	(20.5)
Interpersonal Relationships	6	(15.4)
Attitudes	4	(10.3)
Personality	4	(10.3)
Emotional Development	3	(7.7)
Perception of Self	2	(5.1)
Motivation	1	(2.6)
Development of Values	1	(2.6)
Socioemotional Factors relating to Education	1	(2.6)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NSF FY '77 early childhood research (39 projects).

Table 157

Breakdown of NSF FY '77 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	11	(28.2)
Parent-Child Relationships	9	(23.1)
Parental Behavior/Roles	6	(15.4)
Child Rearing	5	(12.8)
Family Structure	4	(10.3)
Family/Society Interface	3	(7.7)
Impact of Family on Education	3	(7.7)
Sibling Relationships	2	(5.1)
Family Health	2	(5.1)
Child Care Arrangements	1	(2.6)
Working Mother	1	(2.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NSF FY '77 early childhood research (39 projects).

APPENDIX A

AGENCY PLANS FOR EARLY CHILDHOOD RESEARCH IN FY '78

The data shown in this appendix were derived from questionnaires distributed to individuals within the member agencies. For each area, the agencies who indicated a high, medium, or low level of interest are listed in the appropriate columns. A rating of high indicates that an agency will give a relatively great deal of priority to research activity in that area. Medium is designated when the research area is of substantial but secondary interest to the agency. Low denotes areas of research which might be supported but on a very low priority basis. A plus or minus shown in parentheses following an agency acronym indicates that the agency's FY '78 level of interest in that area has increased or decreased significantly from FY '77.

At the time this report was being prepared, NIE indicated that it was still in the process of developing plans, and that the priorities shown for NIE in this appendix were subject to change.

Agency Plans for Research on Children in FY '78

Specific Interests by General Area	Level of Agency Interest FY '78		
	HIGH	MEDIUM	LOW
THE DEVELOPMENTAL PROCESSES			
Cognitive development	NSF, NIMH, NIE	ACYF, BEH	
Perception/attention	NICHD, NSF, NIMH, NIE	NINCDS, OIE, ACYF, BEH	USDA
Thought processes	NINCDS, OIE, NICHD, NSF, NIMH, NIE	USDA, BEH	
Learning	NINCDS, BEH, NICHD, NIMH, NIE	USDA, BOAE, ACYF	
Language	NINCDS, NICHD, NSF, NIMH, NIE	OIE, BOAE, ACYF, BEH	
Intellectual Handicaps	NINCDS, BEH, NICHD, NIMH	BOAE	USDA, NIE
Socioemotional development	NSF, NIMH, NIE	OIE(+), ACYF	
Self-concept (e.g., locus of control, sexual identity)	NSF, NIMH, NIE	BEH(+)	USDA, NICHD
Interpersonal relationships	USDA, NSF, NIE	BEH, NICHD(+)	
Emotional development (e.g., anxiety, alienation)	BEH, NIMH, NIE	USDA, OIE, ACYF, NICHD(+), NSF	
Attitudes	NSF, NIMH, NIE	USDA, OIE(+), BOAE, ACYF, BEH, NICHD	
Moral development	NSF	ACYF, NIMH, NIE	NICHD
Physical development			NIMH
Body growth	NINCDS	NICHD	USDA, ACYF, NIMH
Sensorimotor development	NINCDS	ACYF, BEH, NICHD	NIMH, NIE
Physical disease and illness	NINCDS	NICHD, NIMH	USDA, OIE,
Fetal & Neonatal health/nutrition	NINCDS, NIAAA(+)		USDA, NIMH, NIE
Physical handicaps	NINCDS	BOAE, ACYF, BEH(+), NICHD, NIMH	NIE

Agency Plans for Research on Children in FY '78

Specific Interests by General Area	Level of Agency Interest FY '78		
	HIGH	MEDIUM	LOW
THE CHILD's ENVIRONMENT			
The family	OIE, ACYF, NIMH	NIE	
Structure of the family	OIE, ACYF, NIMH	USDA	NICHD, NSF, NIE
Family functioning (including intrafamily relationships)	OIE, ACYF(+), NIMH		NICHD, NIE
Family health		USDA, ACYF, NICHD(+)	NIMH
Family's interface with society	USDA, ACYF, NIMH	NSF, NIE	NICHD
Physical environment of the home	USDA, NIMH	ACYF, BEH	NINCDS, NICHD
Parenting skills (parent education)	USDA, OIE, ACYF, BEH, NIMH	NICHD, NIE	
The neighborhood/community environment	ACYF(+), NIMH	NIE	
Social environment (e.g., interrelationships among people, institutions, services)	USDA, OIE, ACYF(+), NIE	BOAE, BEH, NIMH	NICHD
Peers	NIMH	ACYF(+), BEH(+), NICHD(+), NIE	USDA
Physical environment (e.g., facilities, housing)	OIE(-), ACYF(+)	USDA, NIMH, NIE	NICHD
Social/cultural/religious influences	NIMH	USDA, ACYF, NIE	NICHD
Mass media & TV	NIMH	ACYF, NIE	USDA, OIE, NICHD, NSF
Social changes and crises (e.g., unemployment, geographic mobility)	NICHD, NIMH		USDA, ACYF, NSF, NIE
Legal rights and responsibilities of children	NIMH	NINCDS, ACYF, BEH, NIE	NICHD

Agency Plans for Research on Children in FY '78

Specific Interests by General Area	Level of Agency Interest FY '78		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT (Cont.)			
Day care		NIMH	
Impact on the child		ACYF, NIMH	USDA, NICHD,NSF
Impact on the family		ACYF, NIMH	USDA, NICHD
Delivery of day care services	ACYF		USDA, NIMH
Alternatives to center-based day care	NIMH	ACYF	USDA
Education			
Infant education/stimulation programs	BEH, NIMH	ACYF, NICHD	NIE
Preschool education	ACYF, BEH, NIMH	USDA, NICHD	NIE
Special education	BEH, NIMH	ACYF, NICHD	NIE
Instructional techniques	BEH, NIE	NIMH	USDA, NICHD
Curricula	BEH, NIE	ACYF	USDA, NIMH
Bilingual instruction	ACYF, NIE	BOAE, BEH	NIMH
Teaching innovations (e.g., open classroom)	BEH, NIE	BOAE, ACYF	USDA, OIE, NICHD, NIMH
Equipment/technological innovations (e.g., TV)	BEH, NIE		OIE, NIMH
Basic skills	NIE	ACYF(+), BEH	NIMH
Reading	NICHD, NIE	ACYF, BEH(+), NIMH	NSF
Desegregation	NIE		NIMH
Voucher plans			NIMH, NIE
Career Awareness	BEH, NIE	OIE, BOAE	NIMH

Agency Plans for Research on Children in FY '78

Specific Interests by General Area	Level of Agency Interest FY '78		
	HIGH	MEDIUM	LOW
Health care and services	NIMH		
Mental health	NIMH	ACYF(+), BEH	USDA
Physical health	NINCDS	USDA, NICHD(+)	ACYF, NIMH
Child abuse (e.g., diagnosis, treatment)	ACYF(+)	BEH, NIMH	NINCDS, NICHD
Nutrition	NICHD	NINCDS, USDA, NIMH	ACYF, NIE
Handicaps	NINCDS, NICHD	BEH, NIMH	USDA, ACYF
Pre & post-natal care	NINCDS, NICHD, NIMH		USDA, ACYF
Family planning	NICHD	NIMH	NINCDS, USDA ACYF
Welfare services		NIMH	
Foster care & adoptive Services	ACYF		NIMH
Child abuse (e.g., preventive, intervention, family support)	ACYF, NIMH	BEH	
Emergency services		ACYF	NIMH
Advocacy		ACYF, NIMH	
Global approach	NIMH		NIE
Whole child/interrelations among developmental processes	ACYF, BEH(+), NIMH	USDA, BOAE, NICHD	NSF
Ecological studies	ACYF, NIMH	NINCDS, USDA, BEH(+), NICHD	NSF
Combined and/or comparative effects of social programs	ACYF, NIMH	BEH	USDA, NSF

Agency Plans for Research on Children in FY '78

Specific Interests by General Area	Level of Agency Interest FY '78		
	HIGH	MEDIUM	LOW
RESEARCH TARGET GROUP			
Prenatal	NINCDS, NICHD		USDA, NIMH, NIE
Infancy	NINCDS, BEH(+), NICHD, NIMH	ACYF	USDA, NSF, NIE
One to three years of age	NINCDS, ACYF, BEH, NICHD, NIMH		USDA, NSF, NIE
Preschool age	NINCDS, USDA, ACYF, BEH, NICHD, NIMH		NIE
Kindergarten and elementary	NINCDS, BEH, NICHD, NIE	USDA, ACYF, NIMH	
Minority ethnic groups	NINCDS, OIE, ACYF, NIMH, NIE	DIE, BOAE	USDA, NICHD
Disadvantaged	NINCDS, ACYF, NIMH, NIE	BOAE, NICHD	
Gifted	NIE	BOAE, ACYF(+), BEH, NIMH	USDA, NICHD
Average ability	NIE	ACYF	USDA, NIMH
Physically handicapped	NINCDS, BEH	OIE, BOAE, ACYF, NIMH	NICHD, NIE
Intellectually handicapped	NINCDS, BEH, NICHD, NIMH	OIE, ACYF	NIE
Bilingual	ACYF, NIE	BOAE, BEH	NICHD, USDA, NIMH
Learning disabled	NINCDS, BEH, NICHD, NIMH	OIE, ACYF	NIE

Agency Plans for Research on Children in FY '78

Specific Interests by General Area	Level of Agency Interest FY '78		
	HIGH	MEDIUM	LOW
RESEARCH ON METHODOLOGY			
Tests & measures development	ACYF	NINCDS, USDA, NIMH, NIE	OIE, NICHD
Program evaluation methods	OIE, ACYF, BEH(+), NIE	USDA, BOAE	NICHD
Observational methods	BEH(+), NIMH	ACYF	USDA, NICHD, NSF, NIE
Interview, survey, questionnaire methods	NINCDS, NIMH	ACYF(+), BEH	USDA, NICHD, NIE
Research design	NINCDS, NIMH, NIE	USDA, BOAE, ACYF, BEH, NICHD	NSF
Statistical techniques	NINCDS, NIE	BOAE, ACYF, BEH, NICHD, NIMH	USDA(+), NSF
Methodology of Longitudinal Research	NINCDS, NIMH	USDA, ACYF, BEH, NIE	NICHD, NSF
Methods to improve comparability	NINCDS, ACYF, BEH(+), NIMH	BOAE, NICHD, NIE	USDA
STUDY OF RESEARCH PLANNING AND DISSEMINATION			
Planning interagency research		NINCDS, USDA(+), BOAE, ACYF, BEH, NIMH, NIE	NICHD
Planning interdisciplinary research	BEH, NIMH, NIE	NINCDS, USDA, ACYF(+), NICHD	
Conferences/studies relating to Federal research needs and goals	NICHD, NIMH, NIE	NINCDS, BOAE, ACYF, BEH	
State-of-the-Art papers	ACYF, NIMH	USDA, BOAE, BEH, NICHD, NIE	
Studies of dissemination/utilization of findings	NINCDS, ACYF, BEH, NIMH, NIE	USDA, BOAE	NICHD
Development of information collection, processing, and analysis systems	NINCDS, ACYF, BEH, NIMH(+)	USDA, BOAE, NIE	NICHD

APPENDIX B

THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

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COMMERCE, U.S. DEPARTMENT OF

I. Bureau of the Census

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HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF

I. Office of the Assistant Secretary for Planning and Evaluation (OASPE)

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*Persons listed here were acting as representatives of their agencies on the Interagency Panel on Early Childhood Research and Development as of March 1, 1978. This list is subject to change.

HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF (Continued)

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HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF (Continued)

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C. Office of Education (OE)

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HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF (Continued)

III. Education

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Dr. James L. Hamilton, Bureau of Education for the Handicapped(BEH), OE, Room 3361, Donohoe Building, 400 Maryland Avenue, S.W., Washington, D.C. 20202	245-9836
Mr. W. Stanley Kruger, Special Programs Staff, Bureau of Elementary and Secondary Education (BESE), OE, Room 2083, FOB #6, 400 Maryland Avenue, S.W., Washington, D.C. 20202	245-8118

IV. Public Health Services (PHS)

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A. Alcohol Drug Abuse and Mental Health Administration (ADAMHA)

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HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF (Continued)

IV. Public Health Services (PHS)

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B. Health Services Administration

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HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF (Continued)

IV. Public Health Services

C. National Institutes of Health

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APPENDIX C

A SELECTED BIBLIOGRAPHY OF DOCUMENTS PREPARED FOR THE INTERAGENCY PANELS ON EARLY CHILDHOOD AND ADOLESCENCE RESEARCH AND DEVELOPMENT*

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*Listed documents are available from the Social Research Group, George Washington University. Documents with an ERIC number may be ordered from ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210, (703) 841-1212.

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